TRAIT PERFECTIONISM AND PERFECTIONISTIC SELF-PRESENTATION IN PSYCHOLOGICAL DISTRESS: THE MEDIATIONAL ROLE OF SELF-IMAGE GOALS

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Abstract

The current research was designed to qualify and extend existing theory and research in the perfectionism field by considering the need to be perfect from a perspective that emphasizes motivation and the self. It is our contention that perfectionists are ego-involved and defensively focused on perfecting the self in ways that are clearly reflected in their goal pursuits. In particular, perfectionism involves a tendency to pursue and be cognitively preoccupied with the self-image goals described by Crocker and her colleagues (2008, 2012). The primary goal of the present research was to uniquely examine the links between dimensions of perfectionism and the pursuit of self-image goals and compassionate goals across various domains. Four studies are reported. Analyses confirmed that both trait and self-presentational perfectionism were consistently linked with the pursuit of self-image goals, which involve the desire to create positive images of the self. This was in contrast to compassionate goals, which focus more on supporting others, where the results were more mixed: compassionate goals were positively linked with some facets of perfectionism, but negative links also emerged when controlling for self-image goals. The primary evidence across four studies suggested that the association between perfectionism and self-image goals is generalizable and was detected in various goal pursuit domains (i.e., achievement, interpersonal, and self-improvement goals). Moreover, evidence indicated that self-image goals mediated the links that perfectionism had with psychological distress both cross-sectionally and longitudinally. The findings from these studies point to the need to revise existing motivational accounts of perfectionism by recognizing that the approach and avoidance tendencies of perfectionists are often experienced and expressed within the context of self-image goals that guide much of what perfectionists do and how they act and react in their daily lives.

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Chapter 1

Introduction

Interest in research and theory on perfectionism continues to grow and this sustained interest likely reflects the pervasiveness and destructiveness of perfectionism. Research with children and adolescents suggests that about 3 in 10 young people have some form of maladaptive perfectionism (see Rice, Ashby, & Gilman, 2011). An understanding of individual perfectionists as well as the perfectionism construct has been advanced by some critical insights. First, perfectionism is multidimensional; in addition to intrapersonal and interpersonal trait dimensions (Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991), there is also a self-presentational component that involves trying to appear perfect and hiding imperfections from others (i.e., perfectionistic self-presentation; Hewitt et al., 2003). Second, research continues to document the costs and consequences of perfectionism, especially in terms of mental health consequences. Extensive research has demonstrated links between dimensions of perfectionism and depression, social anxiety, stress, worry, rumination, burnout, and even mortality and suicide (Blatt, 1995; Cox & Enns, 2003; Flett, Nepon, & Hewitt, 2016; Fry & Debats, 2009; Hill & Curran, 2016; Nepon, Flett, Hewitt, & Molnar, 2011; O'Connor, 2007).

Finally, and most importantly for the purpose of the present studies, research on the multidimensional perfectionism construct has found that there is a salient motivational component. This facet of the construct was first highlighted by Hewitt and Flett (1990) who developed a brief measure of the motivation to be perfect. They later went on to include a motivational element in the conceptualization and assessment of trait self-oriented perfectionism and socially prescribed perfectionism. Self-oriented perfectionists (i.e. those who set extremely high standards for themselves) were described as being driven and engaged in the relentless

pursuit of absolute perfection. This description was presented again by Spence and Robbins (1992) in their account of driven workaholics striving for personal perfection. In contrast, higher levels of socially prescribed perfectionism (i.e., the belief that perfectionistic demands are being imposed on the self by others or society in general) were described as containing aspects of helplessness, hopelessness, and a lack of motivation (Hewitt & Flett, 1991).

While much has been learned about perfectionism and motivation, there is still a need for a better understanding of what drives perfectionists and why they are so driven. Existing work on perfectionism and motivation has not captured the self-preoccupation and defensiveness of those with higher levels of perfectionism. Thus, research in this area would benefit by developing a larger focus on the role of self and personal identity and how this is reflected in the goals, drives, and motives of perfectionists. In a sense, this focus on the role of the self in perfectionism is a return to the initial work in this field and the emphasis that both Hewitt and Flett (1990, 1991) and Frost and colleagues (1990) placed on perfecting the self according to exceedingly high personal standards. There should be an extensive focus on self and ego involvement for many perfectionists due to their need to be perfect people, as well as a tendency to be self-critical and focused on ruminative thoughts involving the need to be perfect (for related discussions, see Flett, Hewitt, Blankstein, & Gray, 1998; Hewitt & Genest, 1990). It is our contention that perfectionists are actually driven by self-image goals and the need to achieve a desired identity. The approach we are promoting seeks to reframe the need to be perfect in terms of concerns involving the self. An example of this approach is research on fear of failure demonstrating that this orientation is underscored by an introjected tendency to be self-blaming and less self-affirming during failure experiences (Conroy, 2003; Conroy & Coatsworth, 2007). This research on the role of the self and self-evaluation has clear implications for perfectionism, given the

established link between perfectionism and fear of failure, as well as their self-inadequacies being exposed (Conroy, Kaye, & Fifer, 2007) and suggestions that this drives perfectionists.

The current research focused on the interpersonal components of perfectionism (i.e., socially prescribed perfectionism and perfectionistic self-presentation) and how they are associated with self-image goals, a novel construct that has not yet been assessed in the perfectionism literature. High self-image goals involve creating, maintaining, and defending desired images of the self; for example, "get others to recognize or acknowledge your positive qualities" (Crocker & Canevello, 2008). Self-image goals were expected to be linked with various components of the perfectionism construct, especially those interpersonally-based facets of perfectionism and these anticipated associations would have negative implications for personal and social functioning. It is critical to determine the links between self-image goals and perfectionism because having high self-image goals may pose various risks to the health and well-being of certain perfectionists. Indeed, these goals may help to account for why people high in the social components of perfectionism, particularly perfectionistic self-presentation, experience social anxiety, depression, loneliness, and poor health.

It is important to note here a major distinction between self-image goals and dimensions of perfectionism, which can be understood from the perspective of what Cantor (1990) stated about "having versus doing." Cantor (1990) adopted the classic distinction in the personality field between having versus doing introduced by Gordon Allport (1937). In the current context, the focus on "doing" refers to the active pursuit of self-image and compassionate goals because these goals are believed to reflected in ongoing daily behaviours and interaction patterns. At present, much has been learned in the published literature about "what perfectionists have" in terms of their characteristics and features, but much less is known about "what perfectionists

actually do" from a daily or weekly perspective. The current work reflects the premise that much of what perfectionistic people actually do is geared toward approximating and achieving self-image goals.

The present research consisted of a series of studies that build on previous findings by further extending the Perfectionism Social Disconnection Model (Hewitt, Flett, & Mikail, 2017; Hewitt, Flett, Sherry, & Caelian, 2006) using a diverse set of research methods. This model, which will be described in more detail later, states that individuals high in certain dimensions of perfectionism (i.e., socially prescribed perfectionism and perfectionistic self-presentation) tend to create a sense of social disconnection from others due to being perceived as distant. These feelings of social disconnection are proposed to then lead to various aversive outcomes, such as suicidal thoughts and attempts (see Hewitt et al., 2006, 2017).

The current work assessed the central premise that perfectionists are chronically focused on self-image goals in an attempt to meet unmet needs for self-validation. Research and theory on self-image goals have emerged from work by Jennifer Crocker and her associates. They have highlighted the destructive role of self-image goals as part of a larger "egosystem." People with high self-image goals have a need to create, maintain, and defend positive images of the self (both public and private) in a very ego-involved and self-conscious manner. Individuals with chronic self-image goals tend to be preoccupied with getting their own needs met, including the need to be acknowledged and recognized by others for possessing highly desirable qualities and avoid being recognized for undesirable attributes (Crocker & Canevello, 2008). As a result, individuals with self-image goals are high on public self-consciousness, as well as social anxiety. These individuals are extremely focused on what they might gain from having other people view them as highly desirable (Canevello & Crocker, 2011). They are also focused on being evaluated

by others, which is similar to individuals high in socially prescribed perfectionism and perfectionistic self-presentation. These facets of perfectionism are referred to as interpersonal or social perfectionism throughout this paper.

Research has shown that self-image goals reflect competitive zero-sum beliefs that are designed to maximize rewards to the self at the expense of others, which may help to explain why people with self-image goals tend to experience interpersonal conflict and loneliness (Crocker & Canevello, 2008). People who frequently have self-image goals also tend care less about other people's needs and hold individualistic beliefs about taking care of others (Crocker & Canevello, 2008). It has been shown that there are negative health and interpersonal costs to having self-image goals (e.g., Canevello & Crocker, 2010, 2011). These findings have many potential negative implications for perfectionists with a chronic focus on self-image goals.

This self-image orientation contrasts with people with more adaptive compassionate goals; these goals are more external and reflect the desire to support and accept others (Crocker & Canevello, 2008, 2012). Individuals with chronic compassionate goals are focused on helping others and increasing other people's well-being rather than trying to gain something for the self (Crocker, 2011). Some of the positive effects of having compassionate goals include feeling a closeness or connectedness with others, as well as receiving support from others (Crocker & Canevello, 2008).

The present research was focused primarily on self-image goals and was based on the premise that self-image goals are critical in the health and well-being of individuals high on the social components of perfectionism. A secondary interest was the role of compassionate goals. Compassionate goals are typically seen as adaptive in terms of promoting health and well-being (Crocker & Canevello, 2008, 2012). Compassionate goals have not been evaluated thus far in

terms of their links with perfectionism. It is self-image goals that are believed to undermine interpersonal relationships as well as mental health (Canevello & Crocker, 2011). Self-image goals are typically assessed using self-report measures and various studies conducted by Crocker and colleagues have explored chronic self-image goals by measuring them on a weekly basis. For instance, one longitudinal study examined the effects of both self-image and compassionate goals on adjustment in a sample of 199 first-year students (Crocker & Canevello, 2008). Interpersonal goals in the areas of academics and friendships were assessed weekly over the course of 10 weeks. Chronic self-image goals predicted increased psychological distress over time, while chronic compassionate goals predicted decreased distress. These findings suggest that at least to some extent, past evidence linking interpersonal perfectionism with social disconnection and alienation from others (e.g., Chen et al., 2012; Sherry, Law, Hewitt, Flett, & Besser, 2008) could be due to a propensity for people pursuing self-image goals to elicit rejection and avoidance from others.

When individuals have high self-image goals, their responsiveness to others is reduced and other people might become aware of this behaviour, and might in turn distance themselves from these individuals (Canevello & Crocker, 2011). The opposite effect is likely true of compassionate goals, whereby having frequent compassionate goals may lead to increased connectedness with others. Indeed, Crocker and Canevello (2008) have found evidence that compassionate goals predicted closeness and feelings of connection with others, while self-image goals predicted conflict and feelings of loneliness. Another study found that self-image goals predicted increased distress over time, while compassionate goals predicted decreased distress in a sample of university students (Crocker, Canevello, Breines, & Flynn, 2010). In addition, these

types of goals may be linked with other theoretically relevant personality traits, such as silencing the self and social comparison orientation.

The present research was based on the Hewitt and Flett (1991) conceptualization of multidimensional perfectionism. They proposed that there are three distinct dimensions of trait perfectionism: (1) self-oriented perfectionism; (2) other-oriented perfectionism; and (3) socially prescribed perfectionism. Self-oriented perfectionism and socially prescribed perfectionism have already been defined earlier and are directed toward the self, whereas other-oriented perfectionism is directed toward other people (i.e., expecting perfection from others). Of these three trait perfectionism dimensions, socially prescribed has been widely considered to be the most destructive. Specifically, socially prescribed perfectionism has been consistently associated with depression and social anxiety (Flett, Madorsky, Hewitt, & Heisel, 2002; Nepon et al., 2011). In a recent review, Flett, Hewitt, and Heisel (2014) outlined evidence linking socially prescribed perfectionism with suicide ideation.

Perfectionistic self-presentation differs from trait perfectionism because of a focus on the need to appear perfect, rather than the need to be perfect (Hewitt et al., 2003). Perfectionistic self-presentation is a highly defensive personality style that has three intercorrelated facets. It involves trying to look perfect in public situations, as well as hiding imperfections from others and avoiding disclosures of imperfections to others (Hewitt et al., 2003). People high in these social dimensions of perfectionism are characterized by a heightened interpersonal sensitivity. Elevated levels of both social aspects of perfectionism have been associated with depression, social anxiety, and interpersonal problems (Cox & Enns, 2003; Flett, Hewitt, Shapiro, & Rayman, 2003; Hewitt et al., 2003). Importantly, perfectionistic self-presentation has predicted unique variance in depression and social anxiety, over and above dimensions of trait

perfectionism (Hewitt et al., 2003). Thus, there are significant costs to a person's health and well-being with this hyper-responsiveness to the social pressures to be perfect and defensively trying to appear perfect. It is likely that the interpersonal components of perfectionism, particularly perfectionistic self-presentation, would be linked with high self-image goals.

At present, the links that dimensions of trait perfectionism and perfectionistic self-presentation have with self-image goals have not yet been established. It is important to determine the relations that self-image goals have with the social components of perfectionism in order to identify self-image goals as a specific mechanism that may help to account for the links that dimensions of perfectionism have with distress and poor health. The proposed association with perfectionistic self-presentation is supported by results of two studies that demonstrated that self-image goals are associated with an orientation toward self-presentation in the context of two kinds of close relationships (Hadden, Øverup, & Knee, 2014). Specifically, in the first study, self-image goals were positively associated with both assertive and defensive self-presentation and negatively associated with need fulfillment within the area of friendships. Moreover, self-image goals mediated the negative relations between friendship need fulfillment and the two types of self-presentation (Hadden et al., 2014). Their second study examined these same associations but within the context of romantic relationships. It was found once again that self-image goals were correlated robustly with assertive self-presentation and defensive self-presentation, and self-image goals mediated the association between need fulfillment and both forms of self-presentation.

As noted earlier, while the link between trait perfectionism dimensions and self-image goals has not been evaluated in previous research, the study by Hadden et al. (2014) described above also yielded findings that point to a link between socially prescribed perfectionism and

self-image goals. Hadden and colleagues (2014) included a measure of fear of negative evaluation in both of their studies and found that it was linked with self-image goals. It has been suggested at a conceptual level and shown empirically that socially prescribed perfectionism is associated with fear of negative evaluation and related forms of social anxiety (see Flett & Hewitt, 2014; Hewitt & Flett, 1991), and it follows that the link between fear of negative evaluation and self-image goals extends to a link between self-image goals and socially prescribed perfectionism and other forms of evaluative concerns perfectionism. It is worth reiterating, however, that the pursuit of self-image goals is also a central component of higher levels of self-oriented perfectionism and its overarching emphasis on perfecting the self.

Two case examples of gifted students underscore the expected links between interpersonal perfectionism and self-image goals (Speirs Neumeister, 2002). Paul and Joyce were described as being high on socially prescribed perfectionism and wanted to be perceived by others as intelligent high-achievers. Paul discussed his concern about taking a very difficult course, but "he felt he had to take it anyway to preserve his image to his peers as intelligent" (p. 55). Joyce also felt she needed to take many challenging AP courses "because such an intensive course load was recognized by her peers and allowed her to preserve her identity as an intellectual" (p. 115). In addition, it was clear in the description of Paul that his motivation for his perfectionism was due to defending a positive self-image: "He acknowledged that his primary purpose for achieving was to receive recognition from others for his successes" (p. 50). These cases illustrate how a self-image goal is reflected in students' actual lives and behaviours, specifically how self-image goals are expressed in achievement and avoidance behaviours.

Historically, older papers on perfectionism point to the central role of self-image goals. For example, Adler (1956) posited that perfectionism involves striving for superiority to

overcome feelings of inferiority about the self. In addition, Hollender (1965) stated that "...perfectionism is motivated by an effort to create a better self-feeling or self-image and to obtain certain responses or supplies from other people" (p. 99). Horney (1950) also highlighted the importance of creating a positive self-image among perfectionists:

> Under inner stress... a person may become alienated from his real self. He will then shift the major part of his energies to the task of molding himself, by a rigid system of inner dictates, into a being of absolute perfection. For nothing short of godlike perfection can fulfill his idealized image of himself and satisfy his pride in the exalted attributes which (so he feels) he has, could have, or should have (Horney, 1950, p. 13).

This emphasis on the self and self-image was also noted by Hilde Bruch in her seminal work with young girls with anorexia. Bruch (1988) noted that when it comes to the young girl or woman with anorexia nervosa, "… all her efforts, her striving for perfection and thinness, are directed toward hiding the fatal flaw of her fundamental inadequacy" (p. 6). According to this account, avoidant and self-destructive behaviours are motivated by a sense of inferiority and inadequacy, as well as a hypersensitivity to criticism. Additionally, Missildine (1963) emphasized goals involving the self by concluding that the striving of perfectionists is perpetuated by the conviction "I am not good enough, I must do better" (p. 77) and this sense of always needing to do better is a goal that fuels the inability of driven perfectionists to experience satisfaction. Despite these early writings about the role of self-image goals in perfectionism, the links between perfectionism and self-image goals have not received empirical attention.

Contemporary research on perfectionism and motivation has focused on two main themes. First, there has been considerable work exploring perfectionism in terms of self-determination theory and its focus on intrinsic, self-determined motivation versus extrinsic

sources of motivation (Deci & Ryan, 2002). Collectively, research in this area has confirmed the motivational deficits and sense of being externally controlled that is inherent in socially prescribed perfectionism. In contrast, examination of self-oriented perfectionists suggests a complex blend of introjected and internalized motives (Miquelon, Vallerand, Grouzet, & Cardinal, 2005; Speirs Neumeister & Finch, 2006; Vansteenkiste et al., 2010; Van Yperen, 2006). Introjection is a form of internal pressure relevant to the distinction between wanting to be perfect versus an internal feeling of being pushed and having to be perfect. Ellis (2002) highlighted this distinction without using similar terms by noting that perfectionism becomes particularly debilitating and irrational when someone feels that he or she must be perfect. Thus, for these people, it is not simply an internalized value; it is somewhat compulsive in nature.

Second, a more extensive line of research has investigated the association between perfectionism and motivation according to goal orientation theory. Elliot and his associates advanced an influential model, known as the 2 X 2 model, which made a key distinction between mastery versus performance goals and approach versus avoidance goals (Elliot & Harackiewicz, 1996; Elliot & McGregor, 1999, 2001). According to this framework, four types of goals exist: (a) mastery approach goals (e.g., “I want to learn as much as possible about this class”); (b) mastery avoidance goals (e.g., “I worry that I may not learn all that I possibly could in this class”); (c) performance approach goals (e.g., “It is important for me to do better than other students”); and (d) performance avoidance goals (e.g., “I just want to avoid doing poorly in this class”). The evidence in this area underscores the complexities involved in both the perfectionism construct and the person who is highly perfectionistic. Research has typically established that trait perfectionism dimensions are linked with numerous goals, with both performance and mastery goals being the focus, along with approach and avoidance goals (Eum

& Rice, 2011; Stoeber, Stoll, Pescheck, & Otto, 2008; Van Yperen, 2006; Verner-Filion & Gaudreau, 2010). Fletcher and Speirs Neumeister (2012) summarized the current research literature and concluded that self-oriented perfectionism is linked with the adoption of mastery approach goals, performance approach goals, and performance avoidance goals. In contrast, socially prescribed perfectionism is typically linked with the adoption of performance approach and performance avoidance goals. Thus, perfectionists tend to have an approach-avoidance conflict where they approach mastery and want to meet perfectionistic standards, but they have a fear of failure. In general, these findings are consistent with descriptions of perfectionists as "overstrivers" who are conflicted due to their need to excessively strive for success in order to avoid failure (see Covington, 2000; Covington & Mueller, 2001). There has also been emerging research expanding the work on achievement motivation to the social domain by exploring social competence goals (Ryan & Shim, 2006).

Perhaps the most critical element of motivation related to perfectionism is the preoccupation with self-image goals and this has not been considered. While a student facing pressure to be perfect may be focused on a self-image goal, the goal itself is an ideal (i.e., needing to be perfect) and it can be a focus on a self-image goal that is a reflection of being pressured by other people or the culture. Although considerable research on perfectionism and motivation has been conducted, such as the work described above on achievement motivation goals as well as the work using the Deci and Ryan (1985, 2000) framework (see Gaudreau & Thompson, 2010), the relations between perfectionism and self-image goals using the framework of Crocker and colleagues has not been incorporated. There is a need for research on perfectionism and motivation to include the tendency for perfectionism to reflect ego involvement, doubts about the self, and the personal sense of inferiority described by Adler

(1956). The drive of perfectionists and their desire to gain approval and avoid failure is likely due, in part, to a tendency to pursue self-image goals. This research focused on what perfectionists do in terms of their ego-involved goal pursuits by evaluating the main premise that trait and self-presentational perfectionism would be associated with self-image goals, in keeping with the views outlined above about the role of the self and identity in needing to be perfect.

It is important to note that only a subset of individuals who are pursuing self-image goals will be perfectionistic because there are several orientations and personality types that could promote an emphasis on self-image goals. Nevertheless, people who feel a pressure to be perfect and also those who try to appear perfect in public are believed to be more susceptible to pursuing these self-image goals that will place them in a more favourable light. It is these individuals who may create experiences of social disconnection that make them more prone to experiencing health problems.

Given that the interpersonal components of perfectionism as well as self-image goals are associated with psychological distress, it stands to reason that the individuals who are both high in social perfectionism and self-image goals tend to experience poor health and well-being because of this defensive tendency to create and maintain positive images of the self. Moreover, because both perfectionistic self-presentation and self-image goals involve impression management by either trying to maintain and defend an image of perfection (i.e., perfectionistic self-presentation) or merely a highly desirable image (i.e., self-image goals), it was expected that perfectionistic self-presentation would be more closely linked with self-image goals, compared to socially prescribed perfectionism. The primary theoretical framework for this research is the Perfectionism Social Disconnection Model, which is outlined in more detail below.

Perfectionism Social Disconnection Model

The Perfectionism Social Disconnection Model (Hewitt et al., 2006, 2017) was proposed specifically to explain the links between the social aspects of perfectionism and suicide, but it represents a general framework for explicating the links that both socially prescribed perfectionism and perfectionistic self-presentation have with various forms of distress. This model posits that the social components of perfectionism lead to numerous interpersonal problems, most importantly feelings of social disconnection. This sense of not belonging may then lead to several negative outcomes, including suicidal ideation and attempts. Therefore, a disconnection from others is believed to account for the association between the interpersonal perfectionism dimensions and suicidal outcomes (Hewitt et al., 2006).

People who are high in socially prescribed perfectionism have a desire to gain approval and acceptance from others and, as a result, they tend to experience loneliness because they believe they will be rejected unless they are perfect (Hewitt et al., 2006). Thus, socially prescribed perfectionists may create a sense of disconnection and isolation from others, which may in turn lead to negative outcomes, such as psychological distress or suicidal behaviour (Hewitt et al., 2006). Additionally, individuals high in perfectionistic self-presentation try to appear flawless in public to gain acceptance from others and enhance their self-esteem. This behaviour may lead others to view these perfectionists negatively and even maintain their distance from them. This social disconnection may be perceived as being so distressing that these individuals will contemplate suicide (Hewitt et al., 2006). Therefore, the point at which the social dimensions of perfectionism lead to a persistent disconnection from others may lead to extreme forms of distress and even suicidal behaviours.

According to the Perfectionism Social Disconnection Model, both objective (i.e., severed or impaired relationships) and subjective (i.e., perceived experience of not belonging) types of

disconnection from others mediate the relations between social perfectionism and suicidal outcomes (Hewitt et al., 2006). One potential consequence of feeling and potentially projecting a sense of social disconnection is that less support is available to those high in the interpersonal aspects of perfectionism. Indeed, a study confirmed the negative link between socially prescribed perfectionism and perceived support from others (Sherry et al., 2008). In this study, the model was extended to include depression as an outcome variable. Perceived social support partially mediated the association between socially prescribed perfectionism and depression.

Nepon and colleagues (2011) tested the Perfectionism Social Disconnection Model and found evidence to support a mediation model. They demonstrated that perceived negative feedback from others and ruminating about interpersonal offenses mediated the links between the pressure to be and appear perfect (i.e., socially prescribed perfectionism and perfectionistic self-presentation, respectively) and symptoms of depression and anxiety. Specifically, negative social feedback mediated the links that perfectionistic self-promotion, nondisplay of imperfection, and socially prescribed perfectionism had with depression, as well as mediating the relation between socially prescribed perfectionism and social anxiety. The results also revealed that interpersonal rumination mediated the relations that perfectionistic self-promotion, nondisplay of imperfection, and socially prescribed perfectionism had with depression, in addition to mediating the link between perfectionistic self-promotion and social anxiety. The Perfectionism Social Disconnection Model was extended in this study to incorporate perfectionistic self-presentation, which was examined in the present research.

Another test of this model also included perfectionistic self-presentation and examined whether being bullied and feeling socially hopeless would mediate the links between the interpersonal components of perfectionism and suicide outcomes (Roxborough et al., 2012).

They found that socially prescribed perfectionism and perfectionistic self-presentation were positively associated with being bullied and social hopelessness, as well as with suicide outcomes in a clinical sample of 152 adolescents. Further support for the Perfectionism Social Disconnection Model was obtained by showing that being bullied and social hopelessness mediated various aspects of interpersonal perfectionism and suicide outcomes (Roxborough et al., 2012).

The current study sought to extend research and theory on the Perfectionism Social Disconnection Model by evaluating the relevance of self-image goals: perfectionism is designed to combat feelings of inferiority about the self, but self-image goals not only promote disconnection from others, but also lower self-esteem (Canevello & Crocker, 2011). In addition, one study found that self-esteem mediated the perfectionism-depression link (Rice, Ashby, & Slaney, 1998).

People with high self-image goals are expected to create a sense of social disconnection, whereas people with low self-image goals are believed to feel a sense of belonging and connection with others. Interpersonal perfectionists with self-image goals should be prone to psychological distress because a focus on these goals alienates other people and has them preoccupied with characteristics about themselves they are predisposed to view negatively because of not meeting prescribed expectations. A primary goal of this research was to establish that self-image goals are among the mechanisms through which the interpersonal aspects of perfectionism are associated with poor mental and physical health and well-being. The focus of this research was on self-image goals versus compassionate goals, as self-image goals and interpersonal perfectionism are more clearly linked from a theoretical standpoint.

A secondary purpose of this research was to build on the growing literature involving self-image and compassionate goals by demonstrating links with psychological distress, loneliness, and physical health symptoms. One of the present studies investigated how self-image and compassionate goals were associated with other theoretically relevant variables, specifically silencing the self, social comparison orientation, and self-consciousness. This study also examined which mechanisms may help to account for the expected links between interpersonal perfectionism and self-image goals, as well as potential variables that may help to differentiate people high in socially prescribed perfectionism who are also high in perfectionistic self-presentation, compared to those high in socially prescribed perfectionism who are lower on perfectionistic self-presentation. The additional theoretically relevant variables are described below.

Perfectionism and Theoretically Relevant Variables

Social Comparison. According to Festinger (1954), the process of social comparison involves making self-judgments when feeling uncertain or worried about one's characteristics or performance. As a result of this insecurity, people then use the information available to them regarding other people while engaging in self-evaluation. A tendency to make frequent social comparisons has been associated with psychological distress (Butzer & Kuiper, 2006).

At present, little research has explored the links between perfectionism and social comparison. Unfavourable social comparisons have been linked with both self-oriented perfectionism and socially prescribed perfectionism (Wyatt & Gilbert, 1998). Another study found that a latent perfectionism variable comprising the Frost dimensions of trait perfectionism (Frost et al., 1990) was linked with a factor related to physical appearance comparison and body comparison; in turn, this social comparison factor was linked with body dissatisfaction (van den

Berg, Thompson, Obremski-Brandon, & Coovert, 2002). In a similar study that also focused on body image comparisons, perfectionism as measured by the Eating Disorder Inventory perfectionism subscale was linked with physical appearance comparisons among adolescent girls (Schutz, Paxton, & Wertheim, 2002). Lastly, Hewitt and colleagues (2003) found that attention to social comparison information was associated with all facets of perfectionistic self-presentation. Given the links between self-image goals and zero-sum beliefs about success (Crocker & Canevello, 2008), it is likely that high self-image goals would be associated with social comparison. In addition, social comparison orientation may help to account for the expected links that socially prescribed perfectionism and perfectionistic self-presentation have with self-image goals.

Silencing the Self. People who are high in self-silencing have the tendency to conceal their thoughts and feelings in order to maintain harmony in interpersonal relationships, gain approval from significant others, and avoid conflict (Jack, 1991, 1999). Individuals who engage in self-silencing have a fear of being negatively evaluated by others and strive for approval, which are also concerns for those high in the social aspects of perfectionism (Besser, Flett, & Hewitt, 2010). Limited research has established a link between dimensions of perfectionism and silencing the self (Flett, Besser, Hewitt, & Davis, 2007; Geller, Cockell, Hewitt, Goldner, & Flett, 2000). In particular, there has been very little research on the links between self-silencing and perfectionistic self-presentation and it is proposed that they are closely linked because both constructs involve not revealing the true self to others. When individuals are high on interpersonal perfectionism, they may feel that they will be judged by others for their imperfections, which may lead them to lower their voices in order to avoid being rejected by others (Besser et al., 2010).

Geller and colleagues (2000) examined how trait perfectionism and perfectionistic self-presentation are associated with silencing the self. The sample consisted of 21 women with anorexia nervosa, who were compared to 21 psychiatric control and 21 normal control women. The results revealed that self-oriented perfectionism, socially prescribed perfectionism, and perfectionistic self-presentation were all robustly correlated with self-silencing, with correlations between .54 and .77. Another study re-examined the relations between perfectionism and self-silencing in a sample of 202 university students (Flett et al., 2007). Self-oriented perfectionism was associated with one of four silencing the self subscales, but most notably, socially prescribed perfectionism was correlated with the overall silencing the self score and all four subscales. More recently, the investigation of the links between perfectionism and self-silencing was extended by incorporating different aspects of the perfectionism construct, specifically perfectionistic self-presentation and perfectionistic cognitions (Nepon, Flett, Besser, & Hewitt, 2009). In this study, socially prescribed perfectionism was linked with overall silencing the self, and three of the four subscales. Perfectionistic cognitions were correlated with overall silencing the self, as well as all four of the subscales (Nepon et al., 2009). The three facets of perfectionistic self-presentation (i.e., perfectionistic self-promotion, nondisplay of imperfection, and nondisclosure of imperfection) were all correlated with overall silencing the self, both perfectionistic self-promotion and nondisclosure of imperfection were further correlated with three of the four subscales, and nondisplay of imperfection was correlated with all four subscales (Nepon et al., 2009).

Collectively, these results demonstrate that dimensions of perfectionism are associated with this unhealthy practice of self-silencing and, thus, illustrate the need to further examine how dimensions of perfectionism are associated with silencing the self. Because people who hide

their true feelings in order to maintain relationship harmony are preoccupied with how they appear to others, it is likely that self-silencing would be positively associated with self-image goals. However, it is also possible that self-image goals may not be as important to people who engage in self-silencing. It may be the case that self-silencing is linked with compassionate goals because with these individuals, the self is sacrificed to preserve relationships with others. Further, it may be the case that self-silencing helps to account for the expected link between interpersonal perfectionism (i.e., socially prescribed perfectionism and perfectionistic self-presentation) and self-image goals. This may be because people who feel a pressure to be perfect and who want to appear perfect in public also have a need to obtain approval from others and may actually engage in self-silencing to maintain interpersonal harmony. In turn, people who try to hide their true emotions to maintain relationships with others and avoid disapproval are likely to also have frequent self-image goals because they want to appear desirable to their significant others.

Self-Consciousness. Self-consciousness has been conceptualized by Fenigstein, Sheier, and Buss (1975) as both private (i.e., awareness of one's inner thoughts and feelings) and public (i.e., awareness of the way in which one is viewed by others). Trapnell and Campbell (1999) have noted the important distinction between rumination and reflection when examining the correlates of private self-consciousness. Research examining the links that self-consciousness has with dimensions of perfectionism and self-image goals is extremely limited. One study has found that public self-consciousness was robustly associated with self-image goals (Crocker & Canevello, 2008). In the same study, private self-consciousness was not significantly correlated with self-image goals. Although compassionate goals were not the focus of the present research,

both public and private self-consciousness have been positively linked with compassionate goals (Crocker & Canevello, 2008).

Individuals with frequent self-image goals as well as those who are high in the social components of perfectionism are believed to be high in public self-consciousness because they want to be acknowledged for their desirable qualities and want to appear perfect in the case of perfectionistic self-presenters. These individuals should be highly focused on how they are viewed by others. Research has found that all facets of perfectionistic self-presentation are positively associated with both public and private self-consciousness, with the higher correlations involving public self-consciousness (Hewitt et al., 2003). Given the links that public self-consciousness has with both self-image goals and perfectionistic self-presentation, it was expected that this construct would help to explain the expected relation between self-image goals and perfectionistic self-presentation.

Growth and Validation Seeking. Dykman (1998) defined validation seeking as a goal seeking orientation involving the need to prove one's worth to others, while growth seeking is focused on opportunities to learn and improve oneself. Validation seeking has been associated with forms of distress, such as depression and anxiety (Gilbert et al., 2007). There has been very little research investigating the links that validation seeking has with both perfectionism and self-image goals.

One study examined how self-oriented perfectionism and socially prescribed perfectionism were associated with growth and validation seeking in a sample of 150 athletes (Hill, Hall, Appleton, & Murray, 2010). The results indicated that both self-oriented and socially prescribed perfectionism were positively linked with validation seeking. While self-oriented

perfectionism was positively linked with growth seeking, socially prescribed perfectionism was not significantly correlated with growth seeking.

A more recent study explored the links among dimensions of perfectionism, growth and validation seeking, and depression in a community sample of 183 adults in Israel (Flett, Besser, & Hewitt, 2014). The results revealed that all trait and self-presentational aspects of perfectionism were substantially linked with validation seeking, with especially high correlations between validation seeking and perfectionistic self-presentation. Socially prescribed perfectionism and two facets of perfectionistic self-presentation (i.e., nondisplay and nondisclosure of imperfection) were negatively correlated with growth seeking, while self-oriented perfectionism was positively correlated with growth seeking. Socially prescribed perfectionism and perfectionistic self-presentation were associated with higher levels of depression. Further, validation seeking mediated the association between interpersonal perfectionism and depression. These links that Flett and colleagues (2014) found with validation seeking suggest that in general, interpersonal perfectionists are likely focused defensively on how they are evaluated.

In addition to the links that aspects of perfectionism have with validation seeking, self-image goals have also been associated with validation seeking (Niiya, Crocker, & Mischkowski, 2012). Specifically, the associations among self-image and compassionate goals and growth and validation seeking were examined in three different samples: undergraduates in the United States, undergraduates in Japan, and adults in Japan. In all three samples, self-image goals were positively correlated with validation seeking and compassionate goals were positively correlated with growth seeking (Niiya et al., 2012). Even after controlling for interdependence, self-image goals predicted validation seeking in all three samples. While self-image goals and dimensions of

perfectionism have both been associated with validation seeking, the links between perfectionism and self-image goals have never been tested. However, the proposed association is supported by the recent research described above testing the role of a validation seeking orientation. This research has confirmed that perfectionists have a motivational orientation focused on validation seeking and this extends to various facets of trait and self-presentational perfectionism. It is our contention that perfectionists are chronically focused on self-image goals and this stems, in part, from their need for validation.

Perfectionism and Social Anxiety

The two-component model of perfectionism and social anxiety distinguishes between the tendency to hold oneself to exacting standards, as well as the tendency to use maladaptive self-appraisals that are focused on not attaining those self-standards (Alden, Ryder, & Mellings, 2002). Flett and Hewitt (2014) have extended this model beyond trait perfectionism to incorporate perfectionistic self-presentation and its role in social anxiety. This revised model has a stronger emphasis on the negative self-appraisals of perfectionists who are also high in social anxiety. Flett and Hewitt (2014) posited that perfectionistic self-presentation is designed in part to hide these feelings of inferiority and inadequacy about the self. Since individuals high in the interpersonal aspects of perfectionism have a strong desire to receive approval from others and have a fear of negative evaluation, they may be at risk of experiencing social anxiety.

Research has shown that socially prescribed perfectionism has been associated with social anxiety (Hewitt & Flett, 1991). People with high levels of social anxiety tend to adopt a protective self-presentational approach where they avoid making undesirable impressions (Leary & Allen, 2011). This behaviour is similar to the responses of certain perfectionists who defensively hide their imperfections from others. Indeed, perfectionistic self-presentation has

been found to be a significant predictor of social anxiety, over and above trait perfectionism (Hewitt et al., 2003). A large-scale study explored perfectionism and social anxiety in two different samples: 324 university students in Mainland China and 333 Caucasian university students in the United States (Xie, Leong, & Feng, 2008). Socially prescribed perfectionism was correlated with social anxiety in both the Mainland Chinese and Caucasian samples with *r*'s of .38 and .21, respectively. Recently, Nepon and colleagues (2011) found that both socially prescribed perfectionism and perfectionistic self-presentation were associated with social anxiety.

Alden and colleagues (2002) did not specifically discuss the potential role of self-image in their model of perfectionism and social anxiety. However, the extended model outlined by Flett and Hewitt (2014) mentioned, "when perfectionism is associated with social anxiety, it is typically accompanied by a highly negative sense of self" (p. 28). They also discussed the role of self-image goals in particular and the need to project a perfect image of the self. Thus, it was expected in the present research that if people have high self-image goals, they may be prone to experiencing social anxiety. Moreover, individuals with high self-image goals are likely to be high in socially prescribed perfectionism and perfectionistic self-presentation. In the current research, it was expected that people with high self-image goals would be prone to social anxiety. When Flett and Hewitt (2014) discussed future directions in their extended model of perfectionism and social anxiety, they stated that "The most pressing need is longitudinal research on perfectionism and social anxiety; to our knowledge, no long-term prospective study has been conducted so the role of perfectionism in vulnerability to social anxiety has not been established." (p. 40). Therefore, one of the goals of the current research was to longitudinally test

whether interpersonal aspects of perfectionism as well as self-image goals would predict social anxiety.

A recent study explored whether the nondisplay of imperfection facet of perfectionistic self-presentation predicts social anxiety using a daily diary method (MacKinnon, Battista, Sherry, & Stewart, 2014). Participants completed various questionnaires each day over the course of 21 days. The results from multilevel regression analyses revealed that nondisplay of imperfection did indeed predict social anxiety both at the between-subjects and within-subjects levels. These findings remained even after controlling for other personality variables (i.e., socially prescribed perfectionism and perfectionistic cognitions) as well as depressed mood.

Another recent longitudinal study explored the roles of both trait and state perfectionism and post-event rumination among 104 socially anxious students (Brown & Kocovski, 2014). First, participants completed measures of trait perfectionism; most notably, the measures included the concern over mistakes and doubts about actions subscales from the Frost et al. (1990) Multidimensional Perfectionism Scale, as well as the socially prescribed perfectionism subscale of the Hewitt and Flett (1991) Multidimensional Perfectionism Scale. All of the perfectionism subscales were modified to assess state perfectionism during a performance situation, as well. This situation involved an anxiety-inducing speech task. They were also administered measures of trait rumination and various indices of distress. Then, two days later, post-event rumination was assessed. Both state and trait perfectionism dimensions were positively linked with trait rumination. In addition, these state and trait perfectionism facets predicted post-event rumination after two days, while controlling for initial levels of social anxiety, state anxiety, and depression.

Perfectionism and Depression

Research has consistently found that elevated levels of socially prescribed perfectionism are associated with elevated levels of depression. Specifically, several studies with university students have shown that greater levels of socially prescribed perfectionism have been correlated with depressive symptoms (Chang, Sanna, Chang, & Bodem, 2008; Flett et al., 2002; Nepon et al., 2011). In a longitudinal study with 515 adolescents, socially prescribed perfectionism predicted depression six months later (O'Connor, Rasmussen, & Hawton, 2010). The results from this study further indicated that socially prescribed perfectionism interacted with acute life stress to predict self-harm after six months.

Extensive research has also shown that perfectionistic self-presentation is correlated with symptoms of depression (Hewitt et al., 2003, Hewitt, Habke, Lee-Baggley, Sherry, & Flett, 2008). For example, perfectionistic self-presentation was found to uniquely predict distress over and above trait perfectionism (Hewitt et al., 2003). In another study, 90 adults participated in a clinical interview where they were asked to disclose their past mistakes (Hewitt et al., 2008). Socially prescribed perfectionism and perfectionistic self-presentation were both linked with distress pre- and post-interview, along with dissatisfaction and negative self-evaluations of performance post-interview. The need to avoid disclosing imperfections was a unique predictor of negative self-evaluations of performance both before and after the interview. Another recent study found that elevated levels of both socially prescribed perfectionism and perfectionistic self-presentation were linked with more symptoms of depression (Nepon et al., 2011).

Perfectionism and Loneliness

At present, research investigating how dimensions of perfectionism are associated with loneliness is extremely limited. Loneliness plays a central role in the Perfectionism Social Disconnection Model, thus underscoring the importance of further research in this area in the

perfectionism literature. Socially prescribed perfectionism was found to be robustly associated with greater levels of loneliness in a sample of university students (Flett, Hewitt & De Rosa, 1996).

Another study confirmed this link between socially prescribed perfectionism and loneliness, and also demonstrated that loneliness in turn was associated with more symptoms of depression and anxiety (Chang et al., 2008). Further, they found that self-oriented perfectionism as well as socially prescribed perfectionism interacted with loneliness to predict depressive symptoms (Chang et al., 2008). This is central to the Perfectionism Social Disconnection Model because feeling a pressure to be perfect and having exacting standards for the self interacted with loneliness or a sense of not belonging, which in turn was associated with more depression.

While research on perfectionism and loneliness is quite limited, research has shown that loneliness is a risk factor for mortality. For example, a meta-analysis of 70 reports was conducted to examine whether people high in loneliness and social isolation are at increased risk for mortality (Holt-Lunstad, Smith, Baker, Harris, & Stephenson, 2015). The results indicated that individuals high in loneliness had a 26% greater likelihood of mortality (OR = 1.26, 95% CI: 1.04 – 1.53), and those high in social isolation had a 29% greater likelihood of mortality (OR = 1.29, 95% CI: 1.06 – 1.56).

Perfectionism and Burnout

Research examining aspects of perfectionism and burnout in students has been limited. Hill and colleagues (2010) investigated the links among trait perfectionism, growth and validation seeking, and athlete burnout. Socially prescribed perfectionism was positively associated with all symptoms of burnout (i.e., reduced sense of accomplishment, emotional and physical exhaustion, and devaluation). In addition, validation seeking mediated the relation

between socially prescribed perfectionism and burnout. Hill and Appleton (2011) expanded previous research on trait perfectionism and athlete burnout by incorporating a cognitive component of the perfectionism construct. They assessed how trait perfectionism, as well as perfectionistic cognitions, were associated with athlete burnout in a sample of 202 male rugby players. The results indicated that frequent perfectionistic cognitions were positively linked with two symptoms of athlete burnout (i.e., reduced sense of accomplishment and exhaustion), and that perfectionistic cognitions uniquely predicted athlete burnout over and above trait perfectionism (Hill & Appleton, 2011). In addition, socially prescribed perfectionism was positively associated with all symptoms of athlete burnout.

Another study explored the associations among perfectionism, workplace burnout, and over commitment to work (Philp, Egan, & Kane, 2012). The sample comprised 69 participants who were seeking workplace counselling services. This study found that an over commitment to work mediated the positive relations between the concern over mistakes aspect of perfectionism and work-related burnout. In a series of two longitudinal studies, Childs and Stoeber (2012) investigated whether individual differences in socially prescribed perfectionism contribute to stress and burnout in the workplace. The first study showed that socially prescribed perfectionism predicted increased levels of role stress and decreased levels of efficacy over time among 69 healthcare workers; the second study replicated these results, and also showed that socially prescribed perfectionism predicted increased levels of both exhaustion and cynicism over time among 195 school teachers (Childs & Stoeber, 2012).

While research has established that aspects of perfectionism are linked with burnout in sporting and workplace contexts, little research has examined perfectionism and burnout among students. One study examined the relations between dimensions of perfectionism and academic

burnout among 482 Chinese university students (Zhang, Gan, & Cham, 2007). The Frost MPS was used to assess perfectionism. The results indicated that doubts about actions, concern over mistakes, and parental expectations were all positively associated with the exhaustion and cynicism subscales of student burnout. Moreover, the doubts about actions factor was negatively associated with efficacy.

Recently, Hill and Curran (2016) conducted a meta-analysis of 43 studies exploring the links between multidimensional perfectionism and burnout. They conceptualized multidimensional perfectionism as higher-order factors known as perfectionistic strivings and perfectionistic concerns. An overall burnout score was assessed, as well as the following symptoms: exhaustion, depersonalization, and reduced personal accomplishment. The results indicated that perfectionistic strivings had small negative links with overall burnout and the symptoms of depersonalization and reduced personal accomplishment, but not exhaustion. Perfectionistic concerns had medium to large positive links with overall burnout and all three symptoms. Semi-partial correlations were also performed and stronger links were found when controlling for the correlation between perfectionistic strivings and perfectionistic concerns. In addition, the semi-partial correlational analyses revealed that perfectionistic strivings were also negatively linked with exhaustion when controlling for the correlation between the two higher-order perfectionism factors. The authors called for future research on potential mediators of the perfectionism and burnout link, which was a goal of the current research where self-image goals were examined as a possible mediator of the perfectionism and burnout links, as well as the links between perfectionism and other indices of physical and psychological health. Further, Hill and Curran (2016) suggested that future research should be in the education domain and the current research assessed student burnout specifically.

Another recent study found that socially prescribed perfectionism was negatively linked with extrinsic motivation, as well as positively linked with student burnout, among a sample of Korean adolescents (Chang, Lee, Byeon, & Lee, 2015). The results also revealed that extrinsic motivation partially mediated the link between socially prescribed perfectionism and academic burnout. While Chang and colleagues (2015) examined the role of extrinsic motivation in the relation between socially prescribed perfectionism and student burnout, there has been no research, to our knowledge, assessing the role of self-image goals in burnout. In addition, research on perfectionism and burnout at present has focused on trait perfectionism dimensions and perfectionistic cognitions; however, perfectionistic self-presentation has not yet been assessed in terms of its links with burnout.

Perfectionism and Physical Health

Considerable research has shown links between perfectionism and both general and specific health symptoms, mainly among university students (Bottos & Dewey, 2004; Martin, Flett, Hewitt, Krames, & Szanto, 1996). Additional research has found that trait perfectionism is positively associated with health symptoms in adult samples (Saboonchi & Lundh, 2003), as well as in medical outpatient samples (Balls-Organista & Miranda, 1991). In a community sample of 492 young adults, socially prescribed perfectionism was found to be linked with poor physical health (Molnar, Reker, Culp, Sadava, & DeCourville, 2006). The latent variable of physical health was composed of perceived health, symptoms, number of visits to a physician, and number of sick days over the last two years. In this study, the relation between socially prescribed perfectionism and physical health was partially mediated by low positive affect and high negative affect.

The links among unidimensional perfectionism, psychosomatic health symptoms, and distress were investigated in a sample of 138 Japanese male students (Sumi & Kanda, 2002). Perfectionism was measured using the Burns Perfectionism Scale, which assesses dysfunctional attitudes with perfectionistic themes. Measures of psychosomatic health symptoms and distress, specifically depression and anxiety, were administered to participants at two time points separated by six weeks. The results revealed that perfectionism was correlated significantly with psychosomatic symptoms, depression, and anxiety at both time points. In addition, perfectionism was a significant predictor of psychosomatic symptoms and depression over time, after controlling for initial psychological symptoms. Another longitudinal study evaluated the relations between perfectionism and physical health symptoms in a sample of 242 undergraduate students at the beginning and end of their first year of study (Pritchard, Wilson, & Yamnitz, 2007). Perfectionism was measured using the unidimensional perfectionism subscale of the Eating Disorder Inventory. Individuals who reported higher levels of perfectionism at Time 2 reported a higher frequency of health symptoms, as well. Perfectionism was also a significant predictor of increases in health symptoms at the end of the academic year, after controlling for levels of health symptoms at Time 1.

The long-term consequences of health problems among individuals high on perfectionism were demonstrated by Fry and Debats (2009) in a seven-year longitudinal investigation of middle-aged Canadians. The results of their study indicated that trait perfectionism, specifically self-oriented perfectionism and socially prescribed perfectionism, predicted all-cause early mortality in the sample. These analyses controlled for other broader personality traits, including conscientiousness and neuroticism, which have been implicated in physical health concerns. This study was extremely important, however, these researchers did not test for mediation in order to

show whether specific variables may account for these links between aspects of perfectionism and early mortality. These findings further highlight the need to study the relations between dimensions of perfectionism, particularly socially prescribed perfectionism and perfectionistic self-presentation, and physical health problems. A more recent study examined mediators of the link between dimensions of trait perfectionism and self-reported physical health (Molnar, Sadava, Flett, & Colautti, 2012). The results indicated that socially prescribed perfectionism was linked with poor physical health; additionally, high perceived stress and low perceived social support fully mediated this association between socially prescribed perfectionism and poor health. This study underscores the importance of investigating potential mediators in the links between perfectionism and physical health, which was one of the goals of the current research, specifically examining self-image goals as a key mediator. Indeed, tests of self-image goals helping to explain the perfectionism-health links are of critical importance.

More recently, Harrison and Craddock (2015) examined health-promoting behaviours as a potential mediator of the association between perfectionism and physical health among 263 students. Examples of the domains for health-promoting behaviours included nutrition, exercise, and relaxation/social support. The following components of physical health-related quality of life were: physical functioning, role-physical, bodily pain, general health, vitality, social functioning, role-emotional, and mental health. Correlational analyses indicated that socially prescribed perfectionism was associated with poorer physical health-related quality of life and fewer health-promoting behaviours. Socially prescribed perfectionism was also the only dimension of trait perfectionism to be uniquely associated with physical health-related quality of life in a regression analysis controlling for social desirability. Lastly, Harrison and Craddock (2015) found that health-promoting behaviours did indeed mediate the negative association between socially

prescribed perfectionism and physical health-related quality of life. The studies described above primarily examined trait perfectionism or unidimensional perfectionism; one of the goals of the current study was to expand upon existing research by incorporating the concept of perfectionistic self-presentation, as well as to explore the role of self-image goals in physical health, which has not yet been assessed to our knowledge.

Goals and Hypotheses

The current research consisted of a series of four studies. First and foremost, the main goal of the present research was to evaluate the link between perfectionism and self-image goals, and it was hypothesized that both trait and self-presentational perfectionism would be linked with the pursuit of self-image goals. It is important to establish that this link between perfectionism and self-image goals can be detected regardless of whether the focus is on goals in the personal achievement domain (Study 1, Study 4); the interpersonal domain (Study 1); or the self-improvement domain (Study 2, Study 3). The present work was unique in that research has not previously investigated perfectionism and self-image goals.

Another goal was to examine the links that interpersonal perfectionism and self-image and compassionate goals have with theoretically relevant variables, including social comparison, self-silencing, both private and public self-consciousness, and growth and validation seeking. We examined the associations among perfectionism, self-image goals, and validation seeking specifically to test the hypothesis that the tendency for perfectionists to pursue self-image goals stems in part from a need for validation, but is not solely a reflection of this other need based on self-esteem.

Study 1 was an initial cross-sectional investigation of how trait and self-presentational perfectionism were associated with the pursuit of self-image goals. In this first study, self-image

as well as compassionate goals were assessed in the domains of academics and friendships. Study 2 was also cross-sectional in design and extended Study 1 by exploring the replicability of the results within the context of self-improvement goals. These studies further explored how perfectionism and self-image goals would relate to social comparison, self-silencing, and self-consciousness (Study 1), as well as growth and validation seeking and mental health (Study 2). Study 3 replicated the previous studies by examining the longitudinal links between dimensions of perfectionism and self-image and compassionate goals in the self-improvement domain, as well as indices of mental and physical health. Lastly, Study 4 was a weekly diary study that took place over the course of three weeks, assessed goals in the domain of academics, and involved reflecting on a stressful event that occurred each week.

The current research expanded on previous findings by establishing that there is a motivational aspect in feeling a pressure to be perfect as well as trying to appear perfect (i.e., self-image goals are involved as key mediators). It is believed that there are certain individuals high on interpersonal perfectionism who have the desire to be and appear flawless to others and be recognized for these perfectionistic qualities. These self-image goals of individuals high in social perfectionism may help to understand why they are more prone to experiencing poor health and psychological well-being. Indeed, this was the first set of studies that assessed the links between perfectionism and self-image goals. It was expected that these goals of creating and defending desired images of the self would help to explain the already established perfectionism-distress links. Given evidence indicating that pursuing self-image goals tends to undermine well-being, we examined the extent to which self-image goals would contribute to the link that perfectionism has with psychological and physical health problems. Specifically, it was hypothesized that self-image goals would mediate the links that exist between perfectionism and

physical and mental health.

These studies also extended the Perfectionism Social Disconnection Model and, therefore, self-image goals were hypothesized to mediate the links between the interpersonal dimensions of perfectionism and various outcomes (i.e., social anxiety, depression, loneliness, and physical health symptoms). It is believed that people with high self-image goals create feelings of social disconnection and these goals would help to explain why people high in socially prescribed perfectionism and perfectionistic self-presentation are more prone to experiencing poor psychological and physical well-being. A unique feature of these studies is that they investigated the role of self-image goals in the psychological and physical health of individuals high in the social aspects of perfectionism.

Chapter 2

Study 1

The main purpose of the first study was to examine the relations among dimensions of trait and self-presentational perfectionism, self-image and compassionate goals, as well as potentially relevant personality and individual difference variables. Specifically, it was an initial investigation of the correlations among self-image and compassionate goals, trait perfectionism, perfectionistic self-presentation, silencing the self, social comparison, and both public and private self-consciousness. This study employed a correlational research design involving a series of self-report questionnaires administered over the Internet. Self-image and compassionate goals were assessed in the domains of both academics and friendships.

Another goal of this study was to conduct several tests of mediation to determine if these theoretically relevant personality variables would help to account for the expected relations between interpersonal perfectionism and self-image goals. This would increase our understanding of certain factors that contribute to the expected link between interpersonal perfectionism, particularly perfectionistic self-presentation, and self-image goals. The roles of self-silencing and self-consciousness were tested in this study because of their clear links with interpersonal perfectionism, especially how one tries to appear in public. While both private and public self-consciousness were examined, it was expected that public self-consciousness in particular would be associated with perfectionistic self-presentation, as well as with self-image goals. It was posited that people who are overly concerned with social comparison are feeling threatened about being evaluated in a way that would also reflect self-consciousness. Thus, it was expected that excessive social comparison orientation would help to account for why certain perfectionists have these self-image goals. It may be the case that these self-image goals are

being driven by variables such as self-consciousness and excessive concern about how one is being compared relative to others, as well as self-silencing.

It was hypothesized that socially prescribed perfectionism and perfectionistic self-presentation would be positively associated with self-image goals, silencing the self, and social comparison. Self-image goals were also expected to be associated with social comparison, self-silencing, and public self-consciousness. Although compassionate goals were not the main focus of this research, it was expected that individuals high in other-oriented perfectionism would have a low level of compassionate goals. In addition, it was hypothesized that the following variables would mediate the links between the social components of perfectionism and self-image goals: social comparison, silencing the self, and public self-consciousness. Because self-image goals have not been associated with private self-consciousness in prior research, there were no hypotheses concerning this variable.

Method

Participants

Across participants, there was a small amount of missing data on the variables of interest (less than 5%). A composite score was computed for participants who had completed at least 70% of the items on each scale. Little's MCAR test was not significant and, therefore, the values were likely to be missing in a random way. Missing values were imputed using the expectation-maximization method in SPSS because research has found this procedure to be preferable compared to other methods, such as listwise deletion and mean substitution (Schafer & Graham, 2002). In addition, three extreme outliers were removed. The final sample consisted of 285 university students, with 223 women and 62 men. The mean age of the participants was 20.4 years (SD = 3.5). More than half of the participants (55.4%) were in their first year of study, with

23.9% in their second year, 7% in their third year, 4.2% in their fourth year, and 1.1% in their fifth year. The most frequently reported intended major was psychology, which was listed by 35.8% of the participants. Other frequently reported intended majors included kinesiology (10.5%) and human resources (9.5%).

Procedure

Participants were recruited through the Undergraduate Research Participant Pool (URPP) at York University. They provided their informed consent prior to participating and were debriefed following completion of the study. In exchange for their participation, students received credit towards their final grade in their introductory psychology courses. They participated in the study in the second term of the school year from the end of February to the beginning of April. Participants were also provided with contact information for the Counselling and Disability Services at York University in the event that they felt any distress during or following the study. All of the data collected from this study were kept anonymous and strictly confidential.

This study was conducted over the Internet, which has been shown to yield findings similar to studies taking place in the laboratory (Birnbaum, 2004). The link to the study was posted on the Undergraduate Research Participant Pool website to ensure that only undergraduate students at York University were able to participate. Moreover, the participants needed to verify their status as York University students in order to proceed.

Measures

Participants were administered the following self-report questionnaires in counterbalanced order:

Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991). The MPS is composed of three distinct dimensions of trait perfectionism: (a) self-oriented perfectionism (e.g., "I strive to be the best at everything I do"); (b) other-oriented perfectionism (e.g., "I have high expectations for the people who are important to me"); and (c) socially prescribed perfectionism (e.g., "The people around me expect me to succeed at everything I do"). Each subscale consists of 15 items. Respondents are asked to rate the degree to which they agree or disagree with each statement, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores on the MPS indicate higher levels of trait perfectionism. Considerable research has shown that the MPS is multidimensional with good reliability and validity in both student and clinical samples (Enns & Cox, 2002; Hewitt & Flett, 2004). The subscales of the MPS have satisfactory convergent and discriminant validity (Hewitt & Flett, 2004). Moreover, the reliability of the MPS has been examined in students, with alpha coefficients ranging from .82 to .87 (Hewitt & Flett, 2004). Similar results were found in clinical samples (Hewitt & Flett, 2004).

Perfectionistic Self-Presentation Scale (PSPS; Hewitt et al., 2003). The PSPS is a 27-item measure that consists of three different facets reflecting the need to appear perfect: (a) perfectionistic self-promotion (10 items: e.g., "I strive to look perfect to others"); (b) nondisplay of imperfection (10 items: e.g., "I judge myself based on the mistakes I make in front of others"); and (c) nondisclosure of imperfection (7 items: e.g., "Admitting failure to others is the worst possible thing"). Scores on the PSPS are rated according to a Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Greater scores on this scale reflect greater levels of perfectionistic self-presentation. The PSPS has adequate internal consistency, with alpha coefficients ranging from .78 to .88 in student, community, and clinical samples (Hewitt et al., 2003). Further, this scale has sufficient test-retest reliability in student and clinical samples, as

well as good convergent and discriminant validity (Hewitt et al., 2003). This scale also has satisfactory construct and predictive validity (Hewitt et al., 2003). Pettit (2002) demonstrated that data involving an online version of the PSPS was comparable to the data from the paper-and-pencil version, thus supporting the use of this measure in online studies.

Compassionate and Self-Image Goals Scale (Crocker & Canevello, 2008). This 13-item measure assesses self-image goals (e.g., "avoid the possibility of being wrong") and compassionate goals (e.g., "have compassion for others' mistakes and weaknesses"). In the current study, all items began with the phrase, "In the past week, how much did you want to or try to." In addition to the original items, four items were added to bolster the approach component (i.e., "let others see that you are capable," "do things to try to earn the approval of others," "display your strengths," and "do things to establish your worth to others"). This decision to add four items was made following the determination that the original set of items tapping self-image goals seemed weighted toward a more defensive orientation reflecting avoiding negative outcomes, rather than displaying positive attributes. Items are rated according to a scale ranging from 1 (*Not at All*) to 5 (*Extremely*). Higher scores on each subscale indicate higher levels of self-image and compassionate goals. Both the compassionate and self-image subscales of this measure have exhibited good internal consistency, with alpha coefficients ranging from .77 to .93 (Crocker et al., 2010). This scale has demonstrated sufficient convergent and discriminant validity (Crocker & Canevello, 2008).

Iowa-Netherlands Social Comparison Measure (INCOM; Gibbons & Buunk, 1999). The INCOM is an 11-item scale that assesses individual differences in the frequency to engage in social comparison. For the present study, the modification recommended by Butzer and Kuiper (2006) was used, which involved removing any frequency-related words, such as "often"

and using a different rating scale. Instead of respondents rating their agreement or disagreement with each item, they rated each item on a scale ranging from 1 (*never*) to 5 (*always*), with higher scores indicating a greater frequency of social comparison. Sample items include "I pay a lot of attention to how I do things compared with how others do things" and "I compare myself with others with respect to what I have accomplished in life." The INCOM has good reliability and validity (Gibbons & Buunk, 1999). In addition, the revised version of the scale has high reliability with an alpha coefficient of .86 (Butzer & Kuiper, 2006).

Silencing the Self Scale (STSS; Jack & Dill, 1992). The STSS is a 31-item inventory developed to assess the relation between silencing the self and depression. It was devised to measure specific cognitive schemas regarding how to create and maintain intimate relationships demonstrated to be associated with depression in women. This inventory provides an overall score and four subscale scores: (a) externalized self-perception (e.g., "I tend to judge myself by how I think other people see me"); (b) care as self-sacrifice (e.g., "Caring means putting the other person's needs in front of my own"); (c) silencing the self (e.g., "I don't speak my feelings in an intimate relationship when I know they will cause disagreement"); and (d) divided self (e.g., "Often I look happy enough on the outside, but inwardly I feel anxious and rebellious"). Items are rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with greater scores reflecting greater levels of self-silencing. The internal consistency of the STSS is acceptable, with alpha coefficients for the total STSS scores between .86 and .94 (Jack & Dill, 1992). The test-retest reliability has also been established for this scale, with coefficients ranging from .88 to .93 (Jack & Dill, 1992). Lastly, the STSS correlates significantly with depression, thus demonstrating good construct validity (Jack & Dill, 1992).

The Self-Consciousness Scale (SCS; Fenigstein et al., 1975). The SCS assesses self-consciousness and the private and public self-consciousness subscales were used in this study. The private self-consciousness subscale is composed of 10 items (e.g., "I'm generally attentive to my inner feelings"), while the public self-consciousness subscale is composed of 7 items (e.g., "I'm concerned about the way I present myself"). Items are rated on a Likert scale ranging from 0 (*extremely uncharacteristic*) to 4 (*extremely characteristic*), with higher scores on the SCS indicating higher levels of private and public self-consciousness. The psychometric properties of this scale have been well established (Fenigstein et al., 1975).

Results

Descriptive Statistics

Table 1 presents the means, standard deviations, and alpha coefficients for each of the measures. Most of the alpha coefficients were .75 or higher, with the exception of other-oriented perfectionism and private self-consciousness. Results concerning those two variables should be interpreted with caution; however, they were not the main focus of this research. As a secondary analysis, tests of gender differences in terms of mean scores of all of the variables were performed. There were no significant gender differences in terms of mean levels of any of the variables.

Correlational Analyses

Table 2 displays the correlations among the trait perfectionism dimensions, facets of perfectionistic self-presentation, self-image and compassionate goals for academics and friendships, social comparison orientation, total silencing the self score, and both public and private self-consciousness. The correlational analyses revealed that self-oriented perfectionism and other-oriented perfectionism were positively linked with self-image goals in the area of

friendships; self-oriented perfectionism, but not other-oriented perfectionism, was positively linked with self-image goals in the area of academics. Self-oriented perfectionism was positively associated with both domains of compassionate goals. Socially prescribed perfectionism was positively correlated with both domains of self-image and compassionate goals. Both perfectionistic self-promotion and nondisplay of imperfection were positively linked with both domains of self-image and compassionate goals. Nondisclosure of imperfection was positively correlated with both domains of self-image goals.

Regarding the links with the theoretically relevant personality variables, self-oriented perfectionism was positively linked with social comparison, total silencing the self, and both private and public self-consciousness. Socially prescribed perfectionism was positively linked with social comparison, silencing the self, and private and public self-consciousness. Perfectionistic self-promotion and nondisplay of imperfection were positively associated with social comparison, silencing the self, as well as with private and public self-consciousness. Nondisclosure of imperfection was positively correlated with silencing the self and only public self-consciousness.

Additionally, self-image goals in the area of academics and friendships were correlated with each other; the same was true for compassionate goals in these two areas. Both types of self-image goals were positively correlated with both types of compassionate goals, which is consistent with previous work and expected (e.g., Crocker & Canevello, 2008). Both types of self-image goals were also positively correlated with social comparison, silencing the self, as well as with private and public self-consciousness. Both types of compassionate goals were positively correlated with social comparison, and private and public self-consciousness; however, only compassionate goals in academics were positively correlated with self-silencing.

Partial Correlations. Partial correlations were performed in order to determine if the established links between aspects of perfectionism and self-image goals for academics and friendships are still significant after controlling for compassionate goals in both areas. Given the positive correlation between self-image and compassionate goals, it was important to examine if the correlations obtained between dimensions of perfectionism and self-image goals would still be significant after partialling out the effect of compassionate goals. These analyses indicated that the correlations established above remained significant after controlling for compassionate goals, with partial correlations ranging from .18 to .58. Although the bivariate correlation between other-oriented perfectionism and self-image goals for academics was not significant, the partial correlation was significant.

In addition, partial correlations were conducted to examine if the links between dimensions of perfectionism and compassionate goals for academics and friendships are still significant after controlling for self-image goals in both domains. These analyses revealed that self-oriented perfectionism was no longer significantly correlated with either type of compassionate goal after controlling for self-image goals. However, many significant negative correlations with compassionate goals emerged after controlling for self-image goals. Other-oriented perfectionism was negatively linked with compassionate goals for academics; socially prescribed perfectionism, perfectionistic self-promotion, and nondisplay of imperfection were all negatively linked with compassionate goals for friendships; and lastly, nondisclosure of imperfection was negatively linked with compassionate goals for both academics and friendships. These partial correlations ranged from -.12 to -.33. Thus, numerous facets of trait and self-presentational perfectionism were actually associated with lower compassionate goals after partialling out the effects of self-image goals.

Regression Analyses

Two hierarchical multiple regression analyses were conducted in order to determine whether perfectionistic self-presentation would predict self-image goals in the area of academics and friendships, over and above trait perfectionism. It was expected that perfectionistic self-presentation would predict unique variance above and beyond trait perfectionism, given the central role that self-image goals seems to play in the case of perfectionistic self-presentation. It is important to note that the sample size for this study and all future studies are enough to conduct these regression analyses. According to Green (1991), even with 15 different predictors, only 139 participants are needed for a medium effect size. To assess the normality of the outcome variables (i.e., self-image goals for academics and friendships), the Shapiro-Wilk test was conducted and the distribution did not differ significantly from normal.

The first regression analysis was performed with the MPS dimensions entered into the first predictor block, followed by the PSPS facets, and with self-image goals in the area of academics entered as the outcome (see Table 3). The dimensions of trait perfectionism significantly predicted 23.9% of the variance in self-image goals for academics scores, $F(3, 281) = 29.40$, $p < .001$. The facets of perfectionistic self-presentation significantly predicted an additional 10.5% of the variance in self-image goals for academics scores, $F(6, 278) = 24.33$, $p < .001$. Therefore, perfectionistic self-presentation did indeed predict unique variance in self-image goals for academics, over and above the variance accounted for by trait perfectionism dimensions. In terms of individual predictors, self-oriented and socially prescribed perfectionism uniquely contributed to self-image goals for academics. Additionally, perfectionistic self-promotion and nondisplay of imperfection uniquely contributed to self-image goals in the area of academics.

The second regression analysis was performed with the MPS dimensions entered first, then the PSPS facets, and with self-image goals in the area of friendships as the outcome (see Table 4). The MPS subscales significantly predicted 24.1% of the variance in self-image goals for friendships scores, $F(3, 281) = 29.79$, $p < .001$. The PSPS facets significantly predicted an additional 16.7% of the variance in self-image goals for friendships scores, $F(6, 278) = 32.00$, $p < .001$. Therefore, like in the first regression, perfectionistic self-presentation predicted unique variance in self-image goals for friendships, over and above trait perfectionism. Regarding individual predictors, self-oriented and socially prescribed perfectionism uniquely contributed to self-image goals for friendships. Moreover, perfectionistic self-promotion and nondisplay of imperfection were unique predictors of self-image goals in the area of friendships.

The Variance Inflation Factors were inspected to check for signs of multicollinearity and for both of these analyses, they were below the common recommendation of 10 (see Hair, Anderson, Tatham, & Black, 1995), as well as below the more stringent recommendations of 5 (see Rogerson, 2001) and even 4 (see Pan & Jackson, 2008). Lastly, the same regressions were performed while controlling for gender, and gender was not significant in either regression and the same pattern of results emerged in both regressions.

Mediation Analyses

Structural equation models were tested with AMOS Version 18 software using maximum likelihood estimation procedures in order to examine whether social comparison, self-silencing, and public self-consciousness would mediate the links between interpersonal perfectionism (i.e., socially prescribed perfectionism and perfectionistic self-presentation) and self-image goals in the areas of academics and friendships. These mediational analyses were conducted to determine which specific mechanisms would help to explain why interpersonal perfectionism is linked with

self-image goals across both domains. Figure 1 displays the final mediational model, which is described in more detail below. In order to assess model fit, the following fit indices were examined: Chi-square, Comparative Fit Index (CFI), Tucker Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and the Standardized Root Mean Residual (SRMR). A model is considered to be a good fit if the Chi-square is nonsignificant, the CFI and TLI are above .95, the RMSEA is less than .05, the 90% confidence interval for the RMSEA includes values less than .05, the *p*-value for the RMSEA is not significant, and lastly, if the SRMR is less than .08.

First, a measurement model was tested with an interpersonal perfectionism latent factor composed of socially prescribed perfectionism and all three facets of perfectionistic self-presentation. This model was an excellent fit to the data, χ^2 (2) = 2.26, p = .324, CFI = .99, TLI = .99, SRMR = .01, RMSEA = .02, 90% CI = .00, .12, p_{close} = .545. All of the dimensions of interpersonal perfectionism had factor loadings above .62.

After establishing that the measurement model was a very good fit, the hypothesized models were then tested. In these models, the predictor was the interpersonal perfectionism latent factor, the mediators were social comparison, self-silencing, and public self-consciousness (in separate models), and the outcome was a latent self-image goals factor with self-image goals in the areas of academics and friendships. Of these three models, the only model where there was evidence of mediation was the one with social comparison as the mediator (see Figure 1). This model was an acceptable fit to the data, χ^2 (12) = 50.04, p = .000, CFI = .96, TLI = .93, SRMR = .05, RMSEA = .11, 90% CI = .08, .14, p_{close} = .001. As can be seen in Figure 1, interpersonal perfectionism was positively associated with social comparison. In turn, social comparison was positively linked with self-image goals in both domains. Interpersonal perfectionism remained

significantly associated with self-image goals when the mediator (i.e., social comparison) was included in the model.

In order to test whether the indirect (i.e., mediated) effect of interpersonal perfectionism on self-image goals through social comparison was significant, 2000 bootstrap samples were generated to obtain 95% bias-corrected bootstrap confidence intervals (MacKinnon, Lockwood, & Williams, 2004; Preacher & Hayes, 2008). MacKinnon and colleagues (2004) found that the bias-corrected bootstrap approach is the best method for constructing confidence intervals on the indirect (i.e., mediated) effects. In addition, bootstrapping is a method that does not impose the assumption of normality (Preacher & Hayes, 2008). The 95% confidence interval for the mediated effect of interpersonal perfectionism on self-image goals through social comparison was .004 to .02. Because this interval does not contain zero, the indirect effect is significant. Therefore, social comparison mediated the link between interpersonal perfectionism and self-image goals.

Discussion

Study 1 was a unique investigation of the links between dimensions of perfectionism and both self-image and compassionate goals. While there has been research in the area of perfectionism and motivation, this was the first study to assess the preoccupation of self-image goals among perfectionists. The key finding was that aspects of both trait and self-presentational perfectionism were indeed positively associated with self-image goals in the areas of academics and friendships. This implies that perfectionists operate according to a chronically activated "egosystem." Another important finding was that social comparison was found to be a specific mechanism that contributed to the links between interpersonal perfectionism and self-image goals.

The main purpose of this first study was to initially examine the potential links between dimensions of perfectionism and self-image goals, as well as compassionate goals, across two different domains (i.e., academics and friendships). As expected, socially prescribed perfectionism and all facets of perfectionistic self-presentation were associated with self-image goals in both domains. Also, self-oriented and other-oriented perfectionism were correlated with self-image goals in the area of friendships, but only self-oriented perfectionism was correlated with self-image goals in the area of academics. The highest of these obtained correlations were between self-image goals for friendships and both perfectionistic self-promotion and nondisplay of imperfection; the correlations between these two facets of perfectionistic self-presentation and self-image goals for academics were also quite high in magnitude. The other correlations between dimensions of trait and self-presentational perfectionism and both domains of self-image goals were roughly similar in magnitude.

Overall, the correlational results indicated that there were indeed links between dimensions of the perfectionism construct and self-image goals, thus supporting the hypotheses and making a unique contribution to the literature. In addition, partial correlations were performed and confirmed that the established correlations between aspects of perfectionism and self-image goals in both domains remained significant after controlling for compassionate goals. Although not a main focus of this study, compassionate goals across both domains were positively correlated with self-oriented perfectionism, socially prescribed perfectionism, perfectionistic self-promotion, and nondisplay of imperfection, which was also unique to this study. However, partial correlations were also performed with compassionate goals while controlling for self-image goals and those results paint a more complex picture. Specifically, negative partial correlations emerged between compassionate goals and aspects of trait and self-

presentational perfectionism (i.e., other-oriented perfectionism, socially prescribed perfectionism, and perfectionistic self-presentation), after controlling for self-image goals. This suggests that the associations involving compassionate goals seem to reflect the correlations between perfectionism and self-image goals. It is important to consider these findings from the perspective of Andrew Hill (2014) who discussed the "perils of partialling" with regards to a perfectionistic strivings construct and how the conceptual meaning of that construct may actually change as a result of partialling or controlling for perfectionistic concerns. Similarly, in the present study, it may be possible that what remains after partialling does not have the same conceptual meaning as what was originally proposed and this may help to explain why some of the correlations switched from positive to negative after the partialling out of self-image goals.

Another goal of the present study was to explore how aspects of perfectionism and both self-image and compassionate goals were related to theoretically relevant personality variables. These personality variables were social comparison, self-silencing, and both public and private self-consciousness. The obtained associations that trait and self-presentational perfectionism had with self-silencing are consistent with prior research (Flett et al., 2007). The correlations between perfectionistic self-presentation and self-silencing were particularly robust in keeping with other results reported previously (Besser et al., 2010). In addition, the links between aspects of perfectionism and social comparison are in keeping with previous studies (Hewitt et al., 2003; Wyatt & Gilbert). Moreover, the links that aspects of perfectionism and self-image goals had with public self-consciousness are consistent with past research (Crocker & Canevello, 2008; Hewitt et al., 2003).

Two hierarchical regression analyses were performed in order to test if perfectionistic self-presentation predicted unique variance in self-image goals across both domains (i.e.,

academics and friendships), over and above the trait perfectionism dimensions. Taken together, the results from these regression analyses demonstrated that perfectionistic self-presentation did indeed predict additional variance in self-image goals in both domains (i.e., academics and friendships), above and beyond trait perfectionism. The same individual predictors that uniquely contributed to self-image goals in both domains emerged from these regression analyses: self-oriented perfectionism, socially prescribed perfectionism, perfectionistic self-promotion, and nondisplay of imperfection. Overall, these findings suggest that individuals high in aspects of trait and self-presentational perfectionism tend to also have goals related to creating and defending positive images of the self.

Lastly, structural equation models were tested in order to determine if social comparison, self-silencing, and public self-consciousness would mediate the relations between interpersonal perfectionism (i.e., socially prescribed perfectionism and perfectionistic self-presentation) and self-image goals in the domains of academics and friendships. These results indicated that social comparison mediated the association between interpersonal perfectionism and self-image goals in both domains. However, there was no evidence indicating that self-silencing and public self-consciousness mediated the association between interpersonal perfectionism and self-image goals. The finding that social comparison mediated this link supported our hypothesis. This finding suggests that social comparison helps to explain the relation between interpersonal perfectionism and self-image goals.

Chapter 3

Study 2

The main goal of the second study was to expand on the first study by exploring the roles of self-image and compassionate goals in a different domain, specifically in the area of self-improvement goals, which are highly relevant to people focused on addressing their imperfections as a way of enhancing the self. The associations that self-image and compassionate goals in this particular domain have with the interpersonal components of perfectionism were examined. Another key purpose of this study was to include two mental health outcomes (i.e., depression and student burnout) to test whether self-image goals would mediate the links between interpersonal perfectionism and poor mental health. These mediational results would be in keeping with the notion that the pursuit of self-image goals contributes to the vulnerability of perfectionists. First, these mental health outcome variables were included in this cross-sectional study before testing these relations longitudinally.

A secondary goal of this second study was to determine if there would be links among interpersonal perfectionism, self-image and compassionate goals, and both growth and validation seeking. At present, research examining these links has been quite limited. To our knowledge, only two studies have found links between perfectionism and validation seeking (Flett et al., 2014; Hill et al., 2010). Validation seeking, in terms of its links with self-image and compassionate goals, has only been assessed in one study (Niiya et al., 2012). In the present study, validation seeking was also tested as a mediator of the link between dimensions of perfectionism and self-image goals for self-improvement. This would extend our understanding of which factors and processes contribute to the links between perfectionism and self-image goals by specifically looking at the role of validation seeking.

It was hypothesized that socially prescribed perfectionism and facets of perfectionistic self-presentation would be positively associated with self-image goals for self-improvement, as well as with depression and student burnout. It was further hypothesized that these interpersonal components of perfectionism would be positively linked with validation seeking. Moreover, self-image goals were expected to be associated with higher levels of depression, student burnout, and validation seeking. It was also expected that validation seeking would mediate the links between aspects of perfectionism and self-image goals. Finally, it was expected that self-image goals in the area of self-improvement would mediate the associations between interpersonal perfectionism and both depression and student burnout. While there has been extensive research demonstrating the links between perfectionism and depression and burnout, this was the first study to explore self-image goals as a key mediator of the link between interpersonal perfectionism and mental health. Because of the limited theoretical and empirical work on the links between interpersonal perfectionism and compassionate goals, there were no specific hypotheses concerning compassionate goals in this study. Compassionate goals were included in this study and subsequent studies to be consistent with Crocker's work and for information purposes. Although no predictions were made regarding how compassionate goals would be linked with aspects of perfectionism, predictions could be made for the indices of psychological distress. Therefore, compassionate goals were expected to be linked with lower levels of depression and student burnout, given previous research by Crocker and colleagues (Crocker & Canevello, 2008; Crocker et al., 2010).

Method

Participants

Similar to Study 1, composite scores were computed for participants who had completed at least 70% of the items on each measure. Little's MCAR test was not significant and, thus, the values were likely to be missing in a random way. Once again, missing values were imputed using the expectation-maximization procedure in SPSS. In addition, two extreme outliers were removed from subsequent analyses. The final sample was composed of 227 university students, with 150 women, 76 men, and 1 person who did not report gender. The mean age of the participants was 20.6 years (*SD* = 4.0). Like Study 1, students were recruited through the undergraduate research participant pool from York University. They received credit towards their final introductory psychology grades in exchange for their participation. Slightly more than half of the participants (52.4%) were in their first year of study, with 19.8% in their second year, 8.4% in their third year, 4.4% in their fourth year, and 3% in their fifth year or higher. The most commonly reported intended major was psychology, which was listed by 33% of the students. Another commonly reported intended major was kinesiology (11.9%).

Procedure

Participants were administered a series of self-report questionnaires in an online study following the same procedure as Study 1. They participated in the study at the end of the second term of the school year in early April. Participants completed the Multidimensional Perfectionism Scale, the Perfectionistic Self-Presentation Scale, and the Compassionate and Self-Image Goals Scale in the area of self-improvement goals (total of 18 items including the additional items created for this research). In addition, participants completed the following self-report measures for Study 2:

Measures

Abbreviated Goal Orientation Inventory (GOI; Dykman, 1998). The abbreviated version of the GOI is a 12-item measure that assesses growth seeking (e.g., "When I'm faced with a difficult or stressful life situation, I'm likely to view it as an opportunity to learn and grow") and validation seeking (e.g., "I feel like I'm constantly trying to prove that I'm as competent as the people around me"). Respondents are asked to indicate the extent to which they agree or disagree with each statement on a scale ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*). Higher scores on the GOI indicate higher levels of growth and validation seeking. Considerable research has shown that the GOI possesses good reliability and validity (Dykman, 1998; Gilbert et al., 2007).

Center for Epidemiological Studies-Depression Scale (CES-D; Radloff, 1977). The CES-D is a 20-item measure that assesses the present level of depressive symptoms in the general population. This scale focuses on both affective (e.g., "I felt sad") and somatic (e.g., "I did not feel like eating; my appetite was poor") symptoms. Items are rated on a Likert scale, with 0 representing *rarely or none of the time (less than one day)* and 3 representing *most or all of the time (5-7 days)*. Higher scores on this scale indicate a higher frequency of depressive symptoms. The CES-D has shown acceptable reliability and validity (Radloff, 1977). Compared to other well-known measures, the CES-D has been suggested as being more successful in identifying differences in the severity of depressive symptoms among students (Santor, Zuroff, Ramsay, Cervantes, & Palacios, 1995).

Maslach Burnout Inventory – Student Survey (MBI–SS; Schaufeli, Martinez, Pinto, Salanova, & Bakker, 2002). The student version of the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981) is a 15-item scale assessing levels of burnout specifically adapted for

use with university students. Respondents are asked to rate how often they have experienced each of the statements. This measure has three subscales: emotional exhaustion (e.g., "I feel emotionally drained by my studies"); cynicism (e.g., "I have become more cynical about the potential usefulness of my studies"); and personal accomplishment (e.g., "I believe that I can make an effective contribution to the classes I attend"). These items are rated on a scale that ranges from 0 (*Never*) to 6 (*Every day*), with higher scores indicating higher levels of exhaustion, cynicism, and personal accomplishment. Research has shown that the MBI–SS has good reliability and construct validity (Maroco, & Bonini Campos, 2012; Schaufeli et al., 2002).

Results

Descriptive Statistics

Table 5 presents the means, standard deviations, and alpha coefficients for each measure. All of the alpha coefficients were .72 or higher, with the exception of other-oriented perfectionism. Therefore, results concerning other-oriented perfectionism should be interpreted with caution, but it is important to note that this variable was not a main focus of this research. As a secondary analysis, tests of sex differences in terms of mean scores for all of the variables were conducted. Most of the variables did not have significant sex differences in terms of mean levels. Only perfectionistic self-promotion, $t(140.16) = -2.32$, $p < .05$, and nondisplay of imperfection, $t(153.80) = -2.25$, $p < .05$, differed significantly in men and women; for both cases, women had higher levels of the two facets of perfectionistic self-presentation compared to men.

Correlational Analyses

Table 6 displays the correlations among the trait perfectionism dimensions, the facets of perfectionistic self-presentation, self-image and compassionate goals in the area of self-improvement, growth and validation seeking, depression, and the three subscales of student

burnout. These analyses indicated that self-oriented perfectionism was positively associated with self-image and compassionate goals in the area of self-improvement. Socially prescribed perfectionism, perfectionistic self-promotion, nondisplay of imperfection were all positively linked with self-image and compassionate goals. Nondisclosure of imperfection was positively linked with self-image goals.

Moreover, self-oriented perfectionism was positively linked with growth seeking, validation seeking, depression, emotional exhaustion, as well as negatively associated with personal accomplishment. Other-oriented perfectionism was only positively linked with emotional exhaustion. Socially prescribed perfectionism, perfectionistic self-promotion, and nondisplay of imperfection were all positively linked with validation seeking, depression, emotional exhaustion, and cynicism. Nondisplay of imperfection was also negatively correlated with personal accomplishment. Nondisclosure of imperfection was positively linked with validation seeking, depression, emotional exhaustion, and cynicism, as well as negatively linked with growth seeking.

Additionally, self-image goals and compassionate goals were positively correlated with each other, and both types of goals were positively correlated with growth and validation seeking, depression, emotional exhaustion, cynicism, and negatively correlated with personal accomplishment. Growth seeking was positively linked with validation seeking and negatively linked with personal accomplishment. Validation seeking was positively associated with depression, emotional exhaustion, cynicism, and negatively associated with personal accomplishment. Depression was correlated with more emotional exhaustion and cynicism. Emotional exhaustion was positively linked with cynicism and negatively linked with personal accomplishment, while cynicism was not significantly linked with personal accomplishment.

Partial Correlations. Like in Study 1, partial correlations were performed to test if the established correlations between dimensions of perfectionism and self-image goals for self-improvement remain significant after controlling for compassionate goals. These analyses revealed that the correlations that self-oriented perfectionism, socially prescribed perfectionism, and all facets of perfectionistic self-presentation had with self-image goals remained significant after controlling for compassionate goals; these partial correlations ranged from .32 to .52.

Additionally, partial correlations were conducted to explore if the links between dimensions of perfectionism and compassionate goals for self-improvement are still significant after controlling for self-image goals. These analyses revealed that self-oriented perfectionism was still significantly correlated with compassionate goals. Similar to Study 1, other-oriented perfectionism (r = -.16, p < .05) and nondisclosure of imperfection (r = -.25, p < .001) were negatively correlated with compassionate goals after controlling for self-image goals. The other dimensions of trait and self-presentational perfectionism were not significantly linked with compassionate goals after partialling out the effects of self-image goals.

Regression Analyses

Predicting Self-Image Goals. Like in Study 1, a hierarchical multiple regression analysis was performed in order to test if perfectionistic self-presentation would predict self-image goals in the area of self-improvement, above and beyond trait perfectionism. This regression was conducted with the MPS dimensions entered into the first predictor block, followed by the PSPS facets, and with self-image goals in the area of self-improvement entered as the outcome (see Table 7). Prior to conducting this regression, an evaluation was conducted of the normality of the outcome variable (i.e., self-image goals for self-improvement) and it appeared to be normally distributed. The trait perfectionism dimensions significantly predicted

26.4% of the variance in self-image goals for self-improvement scores, $F(3, 223) = 26.66$, $p < .001$. The perfectionistic self-presentation subscales significantly predicted an additional 11.8% of the variance in self-image goals for self-improvement scores, $F(6, 220) = 22.67$, $p < .001$. Thus, similar to the regression analyses in Study 1, perfectionistic self-presentation predicted unique variance in self-image goals for self-improvement, over and above the variance accounted for by trait perfectionism. In terms of individual predictors, self-oriented and socially prescribed perfectionism both uniquely contributed to self-image goals for self-improvement. Nondisplay of imperfection also uniquely contributed to self-image goals in the area of self-improvement. As was the case in Study 1, there were no signs of multicollinearity after inspecting the Variance Inflation Factors. Lastly, the same regression was performed while controlling for gender, and gender was not found to be significant and the same pattern of results emerged.

Predicting Depression. Another regression analysis was performed to determine which variables (i.e., trait and self-presentational perfectionism and self-image goals) were important in predicting depression. First, we checked for normality of the outcome variable (i.e., depression) and the distribution did significantly differ from normal, appearing to be positively skewed. As a result, the robust bootstrapping procedure was used, which does not impose the normality assumption. We generated 2000 bootstrap samples to provide estimates, standard errors, and 95% bias-corrected confidence intervals. For this regression, all trait and self-presentational perfectionism dimensions were entered as predictors, as well as self-image goals, and depression was entered as the outcome (see Table 8). This model significantly predicted 28.6% of the variance in depression scores, $F(7, 219) = 12.55$, $p < .001$. The two unique individual predictors of depression were socially prescribed perfectionism and self-image goals for self-improvement.

There were no signs of multicollinearity upon inspection of the Variance Inflation Factors. When performing this regression again while controlling for gender, the same pattern of results was found and gender was not significant. The results also remained the same when compassionate goals were included in the regression and compassionate goals were not significant.

Predicting Student Burnout. Finally, two regression analyses were conducted to determine which of the variables (i.e., perfectionism dimensions and self-image goals) were important in predicting student burnout. Only two of the subscales of burnout were used in these analyses: emotional exhaustion and cynicism. Personal accomplishment was not used, which is consistent with prior research showing that personal accomplishment loads onto a separate factor from exhaustion and cynicism (Schaufeli & Salanova, 2007). Normality was assessed for emotional exhaustion and cynicism and they both differed significantly from normal. The same bootstrapping procedure was used for these regressions. For the first regression, all trait and self-presentational perfectionism facets and self-image goals were entered as predictors, and emotional exhaustion was entered as the outcome (see Table 9). This model significantly predicted 24.1% of the variance in emotional exhaustion scores, $F(7, 219) = 9.92$, $p < .001$. The significant individual predictors of emotional exhaustion were other-oriented perfectionism, socially prescribed perfectionism, nondisplay of imperfection, and self-image goals for self-improvement.

For the next regression, the trait and self-presentational perfectionism dimensions, as well as self-image goals, were entered as predictors and cynicism was entered as the outcome (see Table 10). This model significantly predicted 24.7% of the variance in cynicism scores, $F(7, 219) = 10.27$, $p < .001$. Socially prescribed perfectionism and self-image goals both uniquely contributed to cynicism. Self-oriented perfectionism was negatively associated with cynicism.

For both regressions predicting subscales of student burnout, there were no signs of multicollinearity and gender was not significant when the same regressions were performed, while controlling for gender. Lastly, the results remained the same for both of these regressions when compassionate goals were included and compassionate goals were not significant in either regression.

Mediation Analyses

Two mediational models were tested with AMOS Version 18 software using maximum likelihood estimation procedures to explore whether validation seeking would mediate the links between aspects of perfectionism (i.e., self-oriented and an interpersonal perfectionism latent factor comprising socially prescribed perfectionism and perfectionistic self-presentation) and self-image goals. Validation seeking was included as a mediator in this analysis due its correlations with aspects of perfectionism as well as self-image goals, and it was expected to be an important factor that contributes to the link between perfectionism and self-image goals. Another structural equation model was tested to examine whether self-image goals would mediate the associations between facets of interpersonal perfectionism and both depression and student burnout. This tested a key hypothesis of self-image goals being the proposed mechanism through which interpersonal perfectionism is associated with psychological distress.

First, a measurement model was tested with an interpersonal perfectionism latent factor composed of socially prescribed perfectionism and all three facets of perfectionistic self-presentation. This model was an excellent fit to the data, χ^2 (2) = 4.74, p = .093, CFI = .99, TLI = .98, SRMR = .02, RMSEA = .08, 90% CI = .00, .17, p_{close} = .222. All of the dimensions of interpersonal perfectionism had factor loadings above .60.

After establishing that the measurement model was a very good fit, the hypothesized models were tested. In the first model, the interpersonal perfectionism latent factor was the predictor, validation seeking was the mediator, and self-image goals for self-improvement was the outcome. This final model is depicted in Figure 2. This model provided an adequate fit to the data, χ^2 (8) = 43.44, p = .000, CFI = .95, TLI = .91, SRMR = .05, RMSEA = .14, 90% CI = .10, .18, p_{close} = .000. In this model, interpersonal perfectionism was positively related to validation seeking, which was in turn positively related to self-image goals. Interpersonal perfectionism was still positively related to self-image goals after taking into account the mediator (i.e., validation seeking). In order to test the significance of the indirect effect, 2000 bootstrap samples were generated to obtain the 95% bias-corrected bootstrap confidence intervals. The confidence interval was .01 to .03 and because this interval does not contain zero, the indirect effect is significant. Hence, validation seeking mediated the association between interpersonal perfectionism and self-image goals.

In the second model, self-oriented perfectionism was the predictor, validation seeking was the mediator, and self-image goals for self-improvement was the outcome (see Figure 3). Because this path model was saturated (i.e., df = 0), the fit indices were not useful here. Rather, the primary interest was whether the indirect effect of self-oriented perfectionism on self-image goals through validation seeking was significant. In this model, self-oriented perfectionism was positively linked with validation seeking, which was in turn positively linked with self-image goals. Self-oriented perfectionism was still positively associated with self-image goals after taking into account the mediator (i.e., validation seeking). In order to test the significance of the indirect effect, 2000 bootstrap samples were generated to obtain the 95% bias-corrected bootstrap confidence interval. The confidence interval was .009 to .02 and because this interval

does not contain zero, the indirect effect is significant. Thus, validation seeking mediated the link between self-oriented perfectionism and self-image goals for self-improvement.

In the third and final model, the latent interpersonal perfectionism factor was the predictor, self-image goals for self-improvement was the mediator, and the outcomes were depression and a latent burnout factor with cynicism and emotional exhaustion (see Figure 4). Personal accomplishment was not included in the burnout factor for this model and subsequent models because it did not load highly compared to the other two factors, and, as noted earlier, this is consistent with previous research. In this model, the correlation between depression and burnout was taken into account. Compassionate goals were not included in this mediational model due to the positive correlations with depression and student burnout, which were in the opposite direction as would be expected given previous research in this area (Crocker & Canevello, 2008). This model was a good fit to the data, χ^2 (16) = 43.07, p = .000, CFI = .97, TLI = .95, SRMR = .05, RMSEA = .09, 90% CI = .06, .12, p_{close} = .027. In this model, interpersonal perfectionism was positively associated with self-image goals. In turn, self-image goals were positively related to depression as well as burnout. Interpersonal perfectionism remained significantly linked with depression and burnout when the mediator (i.e., self-image goals) was included in the model. Depression and burnout were also positively correlated with each other (r = .39, p < .001), as expected.

In order to test whether the indirect (i.e., mediated) effects of interpersonal perfectionism on depression and burnout through self-image goals were significant, 2000 bootstrap samples were generated to obtain 95% bias-corrected bootstrap confidence intervals. The 95% confidence interval for the mediated effect of interpersonal perfectionism on depression through self-image goals was .01 to .25, and the 95% confidence interval for the mediated effect involving

interpersonal perfectionism and burnout was .05 to .27. Because both of these intervals do not contain zero, the indirect effects of interpersonal perfectionism on depression and burnout through self-image goals were significant. Thus, self-image goals mediated the associations that interpersonal perfectionism had with depression as well as with burnout. This was the first study to show self-image goals as the mediator of the already established links between interpersonal perfectionism and distress. These findings also extended previous research by showing that perfectionists are at risk of experiencing burnout, and that self-image goals mediated the links between interpersonal perfectionism and burnout in students.

Although not a central focus of this research, another mediation model was tested with self-oriented perfectionism as the predictor, self-image goals as the mediator, and depression and emotional exhaustion as the outcomes. The reason for this model was because of the significant correlations that self-oriented perfectionism had with self-image goals, depression, and emotional exhaustion; cynicism was not significantly correlated with self-oriented perfectionism, so it was not included in this model. The final path model is depicted in Figure 5. Fit indices were not useful because the path model was saturated (i.e., $df = 0$). Rather, we were primarily concerned with the indirect (i.e., mediated) effects of self-image goals in the links between self-oriented perfectionism and both depression and emotional exhaustion. The correlation between depression and emotional exhaustion was taken into account.

In this model, self-oriented perfectionism was positively linked with self-image goals, which was in turn positively linked with both depression and emotional exhaustion. Self-oriented perfectionism was still positively linked with emotional exhaustion, but no longer linked with depression, after taking into account the mediator (i.e., self-image goals). Depression and emotional exhaustion were also positively correlated with each other ($r = .35$, $p < .001$). We

generated 2000 bootstrap samples to obtain 95% bias-corrected bootstrap confidence intervals in order to examine whether the mediated effects were significant. The 95% confidence interval for the indirect effect of self-oriented perfectionism on depression through self-image goals was .05 to .14, and the 95% confidence interval for the indirect effect of self-oriented perfectionism on emotional exhaustion through self-image goals was to .04 to .13. Because both of these confidence intervals do not contain zero, both mediated effects were significant. Thus, self-image goals mediated the relations that self-oriented perfectionism had with depression and emotional exhaustion.

Discussion

Study 2 extended the findings from Study 1 by showing that aspects of trait and self-presentational perfectionism were positively linked with self-image goals in a new domain. Specifically, this study assessed self-image as well as compassionate goals in the area of self-improvement goals. Together with the findings from Study 1, these results indicate that perfectionists tend to pursue goals related to creating and defending desired images of the self. One of the key unique findings from this study was that cross-sectionally, self-image goals helped to explain the links between interpersonal perfectionism and both depression and student burnout. Although extensive research has established that perfectionism is linked with distress, this was the first study to show self-image goals as the mediator of these links.

One of the primary goals of this study was to further establish the links between self-image goals and dimensions of trait and self-presentational perfectionism. The correlational analyses indicated that self-oriented perfectionism, socially prescribed perfectionism, and all perfectionistic self-presentation facets were associated with self-image goals for self-improvement. The obtained correlations between dimensions of the perfectionism construct and

self-image goals for self-improvement were roughly similar in magnitude. Like in Study 1, the highest correlations were found to be between self-image goals and both perfectionistic self-promotion and nondisplay of imperfection. Partial correlations were also performed and confirmed that these correlations were still significant after controlling for compassionate goals. These results replicated Study 1, while also expanding those findings to show links between aspects of perfectionism and self-image goals in a different domain (i.e., self-improvement goals).

Although this was not a focus of the present research, compassionate goals in the area of self-improvement were positively linked with the same dimensions of trait and self-presentational perfectionism as in Study 1, thus replicating the findings and extending them to a new domain. Partial correlations were conducted with compassionate goals as well and found that only self-oriented perfectionism remained significantly correlated with compassionate goals after controlling for self-image goals. However, like in Study 1, other-oriented perfectionism and nondisclosure of imperfection were negatively linked with compassionate goals after controlling for self-image goals. Taken together, these results would seem to suggest that certain facets of trait and self-presentational perfectionism are associated with the pursuit of compassionate goals in various domains, but negative links with compassionate goals appear to emerge for some dimensions of perfectionism when controlling for self-image goals. It is worth reiterating here that partialling may be "perilous" according to Andrew Hill (2014, 2017) and these results should be interpreted with caution.

Another goal of the present study was to examine how aspects of perfectionism and self-image goals were linked with growth and validation seeking, as well as with depression and student burnout. The correlations between dimensions of perfectionism and both growth and

validation seeking were consistent with previous research (Flett et al., 2014; Hill et al., 2010). Moreover, the correlations between aspects of perfectionism and symptoms of depression add to the already extensive literature in this area (e.g., Nepon et al., 2011). Further, the correlation between self-image goals and depression fits with prior research showing that self-image goals are linked with distress (Crocker & Canevello, 2008). The results showing that aspects of perfectionism are linked with student burnout expand on the very limited research in this area.

Although not a primary focus of this research, an unexpected finding was that compassionate goals were positively correlated with depression and facets of student burnout. These correlations were in the opposite direction as predicted and are not consistent with prior research showing that compassionate goals are linked with indices of psychological well-being (e.g., Crocker & Canevello, 2008). However, this research was cross-sectional and it should be noted that the positive correlations that compassionate goals had with depression and the burnout component of cynicism were small. To our knowledge, this was the first study to show links between compassionate goals, as well as self-image goals, and levels of student burnout. While the link between compassionate goals and higher levels of student burnout was unexpected, it is possible that students with chronic compassionate goals are more prone to burnout, at least in part, due to focusing on helping others so much at the expense of their own schoolwork. Indeed, there has been research showing associations between compassion fatigue and burnout; however, these studies are often conducted among those in helping professions. For example, one study found that compassion fatigue was positively correlated with burnout among 503 individuals in the hospice palliative care workforce (Slocum-Gori, Hemsworth, Chan, Carson, & Kazanjian, 2013). Perhaps compassion fatigue may play a role, albeit to a much smaller extent, among university students with chronic compassionate goals. Future research is needed to better

understand these preliminary links between compassionate goals and depression as well as student burnout.

Similar to Study 1, a regression analysis was performed to test if perfectionistic self-presentation would predict unique variance in self-image goals in the area of self-improvement, over and above trait perfectionism. The findings from the present study replicated and extended the results from Study 1 by showing that perfectionistic self-presentation predicted additional variance in self-image goals in a different domain (i.e., self-improvement), above and beyond trait perfectionism. For this regression, the individual predictors that uniquely contributed to self-image goals were self-oriented perfectionism, socially prescribed perfectionism, and nondisplay of imperfection. Overall, the results were very similar to Study 1, implying that people who are high in certain components of perfectionism also have chronic self-image goals and that perfectionistic self-presentation is especially relevant to self-image goals, above and beyond trait perfectionism. Additional regression analyses were conducted to determine which variables (i.e., trait and self-presentational perfectionism and self-image goals) would be important in predicting depression and two components of student burnout (i.e., emotional exhaustion and cynicism). Self-image goals and various aspects of perfectionism were unique individual predictors of the outcome variables.

As was the case in Study 1, mediational models were tested in order to further explore the factors and processes that help to explain how aspects of perfectionism contribute to self-image goals. Specifically, validation seeking was tested as a mediator of the associations that both self-oriented perfectionism and interpersonal perfectionism had with self-image goals. Results from these mediational analyses indicated that validation seeking did indeed mediate the link between self-oriented perfectionism and self-image goals, and between interpersonal perfectionism and

self-image goals. Similar to social comparison in Study 1, validation seeking helps to account for the links found between perfectionism and self-image goals. While there has been research on perfectionism and validation, as well as validation and self-image goals, this was the first study to demonstrate that validation seeking mediates the perfectionism and self-image goals link.

A reasonable topic to consider is why these variables acted as mediators in Study 1 and Study 2. One thing that validation seeking and a social comparison orientation have in common is a sense of uncertainty about the worthiness of the self at a level that could promote a need for reassurance. If self-uncertainty and self-doubt are indeed relevant, perhaps these characteristics underscore the pursuit of self-image goals. Hopefully, future research will further illuminate the factors that contribute to striving for self-image goals.

Another key goal of this study was to explore whether self-image goals would act as a mediator of the relations between interpersonal perfectionism and depression as well as student burnout. A structural equation model was tested with the interpersonal perfectionism dimensions (i.e., socially prescribed perfectionism and perfectionistic self-presentation) as a latent predictor variable, self-image goals as the mediator, and both depression and student burnout as the outcome variables. This model was a good fit to the data and showed that self-image goals did mediate the associations between interpersonal perfectionism and depression as well as burnout. This represents initial evidence that points to self-image goals as the mediator of the already established links between interpersonal perfectionism and distress. These findings also extended previous research by showing that perfectionists are at risk of experiencing burnout, and that self-image goals mediated the links between interpersonal perfectionism and burnout in students.

Lastly, another mediation model was tested to explore whether self-image goals mediated the associations between self-oriented perfectionism and both depression and emotional

exhaustion. Although this was not one of the initial hypotheses, this model was assessed because of the significant correlations found between self-oriented perfectionism and self-image goals, depression, and emotional exhaustion. The results from this mediation model indicated that self-image goals did indeed mediate the associations that self-oriented perfectionism had with depression and emotional exhaustion. Collectively, the mediation findings from this study provide some evidence of the importance of self-image goals in understanding the links that aspects of trait and self-presentational perfectionism have with psychological distress and burnout.

Chapter 4

Study 3

The main findings from Studies 1 and 2 were that various trait and self-presentational perfectionism dimensions were associated with the pursuit of self-image goals. These links were found for self-image goals across different life domains: academics and friendships (Study 1) as well as self-improvement (Study 2). Collectively, these findings suggest that individuals high in aspects of perfectionism tend to have chronic goals related to presenting a positive image of the self, but for them, the image they strive to present is one that makes them seem perfect. Another key finding was that self-image goals was established as a mediator of the links between interpersonal perfectionism and distress.

The primary goal of Study 3 was to extend the initial cross-sectional investigations of Studies 1 and 2 by testing whether trait perfectionism, perfectionistic self-presentation, self-image goals, and compassionate goals would predict social anxiety, depression, loneliness, and physical health symptoms over a period of several months. One of the unique features of this study was that it investigated whether self-image goals were the mechanisms through which the interpersonal components of perfectionism predicted both self-reported physical and psychological health over time. Like Studies 1 and 2, this research was correlational in design with self-report measures administered online, but it was unique because it was the first longitudinal study to examine how dimensions of perfectionism were linked with self-image goals. It was important to replicate the links from the previous studies, as well as the mediational finding, in a longitudinal study that would also expand on the prior findings.

While there has been no longitudinal research to date examining the links between aspects of the perfectionism construct and self-image goals, previous longitudinal research has

established that perfectionism predicts distress over time. For example, unidimensional perfectionism was found to be a predictor of poorer physical health symptoms over time among university students (Pritchard et al., 2007). Another longitudinal study showed that socially prescribed perfectionism predicted depression over time in a sample of adolescents (O'Connor et al., 2010). More recently, MacKinnon and colleagues (2014) conducted a daily diary study and found that nondisplay of imperfection was a predictor of social anxiety over time.

In addition to the longitudinal studies examining perfectionism and distress, there has been longitudinal research on self-image and compassionate goals. More specifically, Crocker and Canevello (2008) found longitudinal evidence that weekly self-image goals predicted conflict and loneliness over time in university students. They also found that weekly compassionate goals predicted closeness and greater social support over time. In another longitudinal study of university students, self-image goals predicted greater distress over time, whereas compassionate goals predicted reduced distress over time (Crocker et al., 2010).

It was hypothesized in the current study that the interpersonal aspects of perfectionism in particular would be positively correlated with self-image goals, social anxiety, depression, loneliness, and physical health symptoms at both time points. It was further hypothesized that self-image goals at Time 2 would mediate the relations between interpersonal perfectionism at Time 1 and both physical and psychological well-being at Time 2. Socially prescribed perfectionism and a latent variable composed of the subscales of perfectionistic self-presentation at Time 1 would be the predictors, self-image goals at Time 2 would be the mediator, and a latent variable composed of all the physical and psychological health indices at Time 2 would be the outcome variable (i.e., social anxiety, depression, loneliness, and physical health symptoms). The unique contribution of this study was that the novel construct of self-image goals were the

specific mechanisms through which social perfectionism was expected to be linked with psychological and physical adjustment over time. There were no hypotheses involving compassionate goals and perfectionism because the primary focus of this research was on self-image goals and there has been a paucity of theoretical and empirical research examining compassionate goals and perfectionism. In addition, compassionate goals in Study 2 were associated with greater depression and student burnout, which was in the opposite direction as hypothesized; thus, it was not clear how compassionate goals would be linked with the physical and mental health outcomes in the current study.

Method

Participants

Similar to Study 1 and Study 2, composite scores were computed for participants who had completed at least 70% of the items on each measure at each time point. Little's MCAR test was not significant at each time point; therefore, the values were likely missing in a random way. Once again, missing values were imputed using the expectation-maximization procedure in SPSS. Only students who completed both time points were included in the final sample. In addition, one extreme multivariate outlier was removed from subsequent analyses. The final sample was composed of 187 university students, with 135 women and 52 men. The mean age of the participants at Time 1 was 19.7 years (SD = 3.4). Like in Studies 1 and 2, students were recruited through the Undergraduate Research Participant Pool at York University. They received credit towards their final introductory psychology grades in exchange for their participation after each time point for a total of two credits. The majority of the participants (59.4%) were in their first year of study, with 20.3% in their second year, 8% in their third year, 3.2% in their fourth year, and 1% in their fifth year or higher. The most commonly reported

intended major was psychology, which was listed by 29.9% of the students. Kinesiology was another commonly reported major, which was listed by 17.1% of the students.

Procedure

This study was longitudinal in design and was administered over the Internet. Participants were asked to complete a series of self-report measures at two different time points: the first term of the school year in November and the second term from February to March.

Measures

The Perfectionistic Self-Presentation Scale, the Compassionate and Self-Image Goals Scale in the area of self-improvement goals, and the Center for Epidemiological Studies-Depression Scale outlined above were administered to the participants at both time points. The Multidimensional Perfectionism Scale was only assessed at Time 1. In addition, the following self-report questionnaires were used for Study 3 at each time point:

Liebowitz Social Anxiety Scale (LSAS; Liebowitz, 1987). The LSAS is a 24-item measure that assesses social phobia. It is composed of two subscales addressing both social interaction (e.g., "Expressing a disagreement or disapproval to people you don't know very well") and performance (e.g., "Acting, performing or giving a talk in front of an audience") situations. Participants were asked to rate how often they felt fear or anxiety as well as how often they avoided each activity over the past week. Fear or anxiety is rated on a Likert scale ranging from 0 (*none*) to 3 (*usually*), while avoidance is rated on a similar scale ranging from 0 (*never*) to 3 (*usually*). Greater scores on the LSAS indicate greater levels of social anxiety. The LSAS has good internal consistency, with alpha coefficients between .81 and .96 (Liebowitz, 1987). Additionally, this scale has sufficient convergent and discriminant validity (Heimberg et al., 1999).

UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980). This scale is composed of 20 items measuring levels of perceived loneliness. Items are rated on a scale ranging from 1 (*never*) to 4 (*always*), with higher scores indicating a higher frequency of feeling alone. Sample items include "How often do you feel that there is no one you can turn to?" and "How often do you feel left out?" This scale possesses sufficient concurrent and discriminant validity (Russell et al., 1980). In addition, this measure has demonstrated good reliability, with an alpha coefficient of .94 (Russell et al., 1980).

SF-36v1 Health Survey (Ware, Snow, Kosinski, & Gandek, 1993). Three subscales of the SF-36v1 were used to assess self-reported physical health symptoms experienced during the past four weeks. The role-physical subscale is composed of four items asking whether the respondent experienced any problems with work or regular activities as a result of their physical health (e.g., "cut down the amount of time you spent on work or other activities?"). Respondents either select *yes* or *no* to these items. The bodily pain subscale consists of two items, with one measuring pain severity rated on a scale ranging from 1 (*not at all*) to 5 (*extremely*). The second item measures the extent to which pain interferes with daily functioning, which is rated on a scale ranging from 1 (*not at all*) to 5 (*extremely*). Lastly, the general health subscale consists of six items. The first item asks respondents to rate their perceived health on a scale that ranges from 1 (*excellent*) to 5 (*poor*). The second item asks respondents to rate their general health now compared to one year ago on a scale ranging from *Much better now than a year ago* to *Much worse now than a year ago*. The remaining four items are rated on a scale ranging from 1 (*definitely true*) to 5 (*definitely false*). A sample item includes "My health is excellent." In addition to the eight subscales of the SF-36v1, there are two summary scores representing physical and mental health components. The physical health summary score includes physical

functioning, role-physical, bodily pain, and general health. The mental health summary score includes vitality, social functioning, role-emotional, and mental health. For the purpose of clarity and concision, only these two summary scores were used in the present study. Previous research on perfectionism and health has used a physical health latent variable composed of the four physical health subscales (Molnar et al., 2012); this latent variable was used for the mediation analyses. The psychometric properties of the SF-36v1 have been well established (Ware et al., 1993). Moreover, the two summary scores of physical and mental health have demonstrated good reliability and validity (Ware, Kosinski, & Keller, 1994).

Results

Descriptive Statistics

Table 11 presents the means, standard deviations, and alpha coefficients for all measures in both Times 1 and 2. Tests of gender differences in terms of mean levels of each variable at both time points were performed. At Time 1, socially prescribed perfectionism, $t(99.38) = -2.03$, $p < .05$, differed significantly in men and women, whereby women had higher levels of this dimension of perfectionism compared to men. Also, women had significantly higher levels of depression, $t(125.23) = -2.67$, $p < .01$, and social anxiety, $t(103.70) = -2.51$, $p < .05$, compared to men at Time 1. Lastly, at Time 1, men had significantly better physical health, $t(119.20) = 2.85$, $p < .01$, and mental health, $t(107.39) = 3.88$, $p < .001$, than women. At Time 2, levels of depression, $t(118.85) = -2.62$, $p < .05$, were again higher in women than men. Like at Time 1, men had significantly better physical health, $t(108.80) = 2.46$, $p < .05$, as well as mental health, $t(124.53) = 3.64$, $p < .001$, than women at Time 2.

In addition, a series of t-tests were performed to determine if there were significant differences in terms of mean levels of all the variables of interest among those who remained in

the study versus those who dropped out. The majority of the variables were not significantly different among those who remained in the study compared to those who dropped out. The only significant difference was with the physical health summary score of the SF-36, such that those who dropped out had significantly better physical health compared to those who remained in the study, $t(53.99) = 2.17$, $p < .05$. Overall, the participants who dropped out do not seem to be much different than those who remained in the study.

Correlational Analyses

Time 1 Correlations. Table 12 displays the Time 1 correlations among trait and self-presentational perfectionism, self-image and compassionate goals, depression, social anxiety, loneliness, and physical and mental health. Self-oriented perfectionism, socially prescribed perfectionism, and all facets of perfectionistic self-presentation were positively correlated with self-image goals in the area of self-improvement. Self-image goals and compassionate goals were positively correlated with each other. None of the aspects of perfectionism were significantly correlated with compassionate goals in the area of self-improvement.

Furthermore, socially prescribed perfectionism and all facets of perfectionistic self-presentation were positively correlated with depression, social anxiety, and loneliness. Socially prescribed perfectionism, nondisplay of imperfection, and nondisclosure of imperfection were linked with lower levels of physical and mental health; perfectionistic self-promotion was linked with lower levels of mental health, but not significantly linked with physical health. In addition, self-image goals were positively associated with depression, social anxiety, and loneliness, and negatively linked with both physical and mental health. Compassionate goals were not significantly associated with any of the indices of physical and mental health.

Time 2 Correlations. Table 13 displays the Time 2 correlations among perfectionistic self-presentation, self-image and compassionate goals, depression, social anxiety, loneliness, and physical and mental health. All facets of perfectionistic self-presentation were positively linked with self-image goals in the area of self-improvement. Self-image goals and compassionate goals were positively linked with each other. All dimensions of perfectionistic self-presentation were linked with higher levels of depression, social anxiety, and loneliness, and lower levels of mental health. Nondisplay and nondisclosure of imperfection were both linked with lower physical health, but perfectionistic self-promotion was not significantly linked with physical health. Self-image goals were positively associated with depression, social anxiety, and loneliness, as well as negatively associated with mental health. Compassionate goals were linked with lower levels of depression and loneliness, as well as better physical health. Because of these significant links involving compassionate goals and better psychological well-being, compassionate goals were included in the regression analyses predicting depression, loneliness, and physical health.

Regression Analyses

Predicting Time 2 Self-Image Goals. A hierarchical multiple regression analysis was conducted in order to test if Time 1 perfectionistic self-presentation would predict Time 2 self-image goals in the area of self-improvement, above and beyond Time 1 trait perfectionism. These findings could replicate the results from Studies 1 and 2, while also extending them by using a longitudinal design to examine if perfectionistic self-presentation predicts unique variance in self-image goals over time, above and beyond trait perfectionism. Prior to conducting this regression, screening for normality was performed and the distribution did not differ significantly from normal. This regression analysis controlled for initial levels of self-image goals (i.e., at Time 1). This regression was conducted with Time 1 self-image goals entered into

the first predictor block, with the Time 1 MPS dimensions entered into the second predictor block, followed by the Time 1 PSPS facets, and with Time 2 self-image goals in the area of self-improvement entered as the outcome (see Table 14). We checked for normality of the outcome variable (i.e., self-image goals for self-improvement) and it appeared to be normally distributed. The Time 1 trait perfectionism dimensions did not significantly predict variance in Time 2 self-image goals for self-improvement, after controlling for Time 1 self-image goals. The block with the Time 1 perfectionistic self-presentation subscales did significantly predict an additional 5.6% of the variance in Time 2 self-image goals for self-improvement scores, $F(7, 179) = 11.98$, $p < .001$. Therefore, perfectionistic self-presentation at Time 1 predicted unique variance in self-image goals for self-improvement at Time 2, over and above the variance accounted for by trait perfectionism at Time 1 and initial levels of self-image goals. In terms of individual predictors, perfectionistic self-promotion at Time 1 predicted increased self-image goals for self-improvement at Time 2. An unexpected finding was that other-oriented perfectionism at Time 1 was negatively associated with self-image goals at Time 2. Like in Studies 1 and 2, there were no signs of multicollinearity after inspecting the Variance Inflation Factors. Also, the same regression was conducted while controlling for gender, and gender was not significant and the same pattern of results emerged.

Predicting Time 2 Depression. Another regression analysis was conducted in order to determine which Time 1 variables (i.e., trait and self-presentational perfectionism and self-image goals) were important in predicting Time 2 depression, while controlling for initial levels of depression. This regression also included compassionate goals due to the significant negative correlation with depression at Time 2. First, normality of the outcome variable was assessed and the distribution appeared to be positively skewed. As a result, the same bootstrapping procedure

was conducted as in Study 2, where 2000 bootstrap samples were generated to provide estimates, standard errors, and 95% bias-corrected confidence intervals. For this regression, Time 1 depression was entered into the first predictor block, followed by all trait and self-presentational perfectionism dimensions at Time 1, along with self-image and compassionate goals at Time 1, and depression at Time 2 was entered as the outcome. This model did not significantly predict additional variance in Time 2 depression scores, after controlling for Time 1 depression scores. There were no signs of multicollinearity upon inspection of the Variance Inflation Factors. When performing this regression again while controlling for gender, the same pattern of results was found and gender was not significant.

Predicting Time 2 Social Anxiety. A regression analysis was conducted to determine which of the Time 1 variables (i.e., perfectionism dimensions and self-image goals) were important in predicting Time 2 social anxiety, while controlling for initial levels of social anxiety. First, normality of the outcome variable was assessed and the distribution appeared to be positively skewed. As a result, the same bootstrapping method was performed. Time 1 social anxiety was entered into the first predictor block, followed by all trait and self-presentational perfectionism dimensions and self-image goals at Time 1, and social anxiety at Time 2 was entered as the outcome (see Table 15). This model significantly predicted an additional 2.8% of the variance in Time 2 social anxiety scores, over and above Time 1 social anxiety scores, $F(8, 178) = 47.00$, $p < .001$. Other than Time 1 social anxiety, there were no significant individual predictors of Time 2 social anxiety. For this regression, there were no signs of multicollinearity. Also, when the same regression was performed while controlling for gender, gender was not significant and the same pattern of results emerged.

Predicting Time 2 Loneliness. A regression analysis was performed in order to explore which Time 1 variables (i.e., MPS and PSPS dimensions, as well as self-image goals) were important in predicting Time 2 loneliness, after controlling for initial levels of loneliness. This analysis also included compassionate goals because of the significant negative correlation with loneliness at Time 2. First, normality of the outcome variable (i.e., loneliness) was assessed and the distribution did not differ significantly from normal. Time 1 loneliness was entered into the first predictor block, followed by all MPS and PSPS facets as well as self-image and compassionate goals at Time 1, and Time 2 loneliness was entered as the outcome (see Table 16). This model significantly predicted an additional 4.2% of the variance in Time 2 loneliness scores after controlling for Time 1 loneliness, $F(9, 177) = 25.04$, $p < .001$. Regarding individual predictors of loneliness, socially prescribed perfectionism at Time 1 predicted an increase in loneliness at Time 2. There were no signs of multicollinearity in this regression. When this same analysis was conducted while controlling for gender, gender was not found to be significant and similar results were found.

Predicting Time 2 Physical Health. A regression analysis was conducted to examine which Time 1 variables (i.e., MPS and PSPS facets and self-image goals) were important in predicting Time 2 physical health, while controlling for initial levels of physical health. Compassionate goals were also incorporated into this regression due to the significant correlation with better physical health. Normality of the outcome was screened for, and the data appeared to be negatively skewed. Consequently, the same bootstrapping procedure was used. Time 1 physical health was entered into the first predictor block, followed by the MPS and PSPS dimensions, along with self-image and compassionate goals at Time 1, and the Time 2 physical health summary score of the SF-36 was entered as the outcome (see Table 17). This model

significantly predicted an additional 6.1% of the variance in Time 2 physical health scores after controlling for Time 1 physical health, $F(9, 177) = 11.95$, $p < .001$. Regarding individual predictors, socially prescribed perfectionism at Time 1 was associated with worse physical health at Time 2, while self-oriented perfectionism at Time 1 was associated with better physical health at Time 2. In addition, compassionate goals at Time 1 were linked with better physical health at Time 2. There were no signs of multicollinearity upon inspection of the Variance Inflation Factors. When performing this regression again while controlling for gender, the same pattern of results was found and gender was not significant.

Predicting Time 2 Mental Health. Lastly, a regression analysis was performed to test which Time 1 variables (i.e., MPS and PSPS facets and self-image goals) were important in predicting Time 2 mental health, while controlling for initial levels of mental health. Similar to the physical health summary score, the distribution for mental health was negatively skewed. Consequently, the same bootstrapping procedure was employed. Time 1 mental health was entered into the first predictor block, followed by the MPS and PSPS dimensions, as well as self-image goals at Time 1, and the Time 2 mental health summary score of the SF-36 was entered as the outcome. This model did not significantly predict variance in Time 2 mental health scores, over and above Time 1 mental health scores. In this regression, there were no signs of multicollinearity. When gender was included in the regression, gender was not significant and the same results were found.

Mediation Analyses

Two structural equation models were tested with AMOS Version 18 software using maximum likelihood estimation procedures to examine whether self-image goals would mediate the links between dimensions of interpersonal perfectionism at Time 1 (i.e., socially prescribed

perfectionism and perfectionistic self-presentation) and the various outcome variables at Time 2 (i.e., depression, social anxiety, loneliness, and the mental and physical health summary scores from the SF-36). The two models differed in terms of the outcome variables; the first model included a latent distress factor comprising depression, social anxiety, and loneliness, and the second model included the two SF-36 summary scores. Initially, one structural equation model was tested, however, the separate models were both better fits to the data than the initial model. These mediational models were tested in order to replicate and expand on the cross-sectional findings from Study 2 by showing self-image goals as a key mediator in the longitudinal links between interpersonal perfectionism and both mental and physical health.

Prior to performing the two structural equation models, a measurement model was tested with an interpersonal perfectionism latent factor composed of socially prescribed perfectionism and all three facets of perfectionistic self-presentation at Time 1. This model was an excellent fit to the data, χ^2 (2) = 1.05, p = .590, CFI = 1.00, TLI = 1.01, SRMR = .01, RMSEA = .00, 90% CI = .00, .12, p_{close} = .713. All of the dimensions of interpersonal perfectionism had factor loadings of .67 or higher.

Model 1. After establishing that the measurement model fit the data very well, the first hypothesized model was tested (see Figure 6). In this model, the predictor was the interpersonal perfectionism latent factor at Time 1, the mediator was self-image goals at Time 2, and the outcome was a distress latent factor comprising Time 2 depression, social anxiety, and loneliness. This model was an adequate fit to the data, χ^2 (18) = 57.69, p = .000, CFI = .93, TLI = .89, SRMR = .06, RMSEA = .11, 90% CI = .08, .14, p_{close} = .001. In this model, interpersonal perfectionism at Time 1 was positively associated with self-image goals at Time 2. However, self-image goals were not significantly related to the distress factor. Because this link between

the mediator and the outcome was not significant, mediation was not found. This model does show that interpersonal perfectionism at Time 1 was significantly and positively linked with distress at Time 2 when self-image goals at Time 2 were included in the model. When compassionate goals were included in this model, it was a worse fit and mediation was not found; therefore, compassionate goals were not included in the final model.

Model 2. Next, the second hypothesized model was tested (see Figure 7). In this model, the predictor was the interpersonal perfectionism latent factor at Time 1, the mediator was self-image goals at Time 2, and the outcomes were the mental health and physical health summary scores of the SF-36 at Time 2. The correlation between the two SF-36 summary scores was taken into account. This model was an adequate fit to the data, χ^2 (11) = 33.69, p = .000, CFI = .95, TLI = .90, SRMR = .05, RMSEA = .11, 90% CI = .07, .15, p_{close} = .013. In this model, interpersonal perfectionism at Time 1 was positively associated with self-image goals at Time 2. However, self-image goals were not significantly related to either of the outcome variables. The mediator (i.e., self-image goals) would need to be significantly linked with the outcome variables (i.e., physical and mental health) in order for mediation to be significant. This model does demonstrate that interpersonal perfectionism at Time 1 was significantly and negatively linked with both mental and physical health at Time 2 when self-image goals at Time 2 were included in the model. Therefore, interpersonal perfectionism was associated with worse mental and physical health three months later. Moreover, physical and mental health were correlated with each other (r = .50, p < .001). Lastly, when compassionate goals were included in this model, interpersonal perfectionism was not significantly associated with compassionate goals and mediation was not found; thus, compassionate goals were not included in the final model.

Alternative Models. Because mediation was not found in the above structural equation models, similar models were tested but with socially prescribed perfectionism and perfectionistic self-presentation at Time 1 in separate models. The mediator (i.e., self-image goals at Time 2) and outcomes (i.e., distress at Time 2 and both mental and physical health at Time 2 in separate models) remained the same. However, compassionate goals at Time 2 were included in these models as a second mediator due to the negative correlations with depression and loneliness and the positive correlation with better physical health at Time 2. Only one of these models had significant mediation and that model is described below.

A structural equation model was conducted with socially prescribed perfectionism at Time 1 as the predictor, self-image goals as well as compassionate goals at Time 2 as the mediators, and the same latent distress variable from Model 1 comprising depression, social anxiety, and loneliness at Time 2 as the outcome. The positive correlation between self-image and compassionate goals was reflected in this model. The results from this model are displayed in Figure 8. This model was a good fit to the data, χ^2 (6) = 12.45, p = .053, CFI = .98, TLI = .94, SRMR = .04, RMSEA = .08, 90% CI = .00, .14, p_{close} = .199. In this model, socially prescribed perfectionism at Time 1 was positively linked with self-image goals at Time 2, as well as negatively linked with compassionate goals at Time 2. In addition, socially prescribed perfectionism at Time 1 was positively associated with distress at Time 2. Socially prescribed perfectionism was still positively linked with distress, after taking into account the mediators (i.e., self-image and compassionate goals). Self-image goals at Time 2 were positively linked with Time 2 distress, while compassionate goals at Time 2 were negatively linked with Time 2 distress. Lastly, self-image and compassionate goals at Time 2 were positively correlated with each other (r = .41, p < .001).

To test the significance of the indirect (i.e., mediated) effects of Time 1 socially prescribed perfectionism on Time 2 distress through self-image and compassionate goals, 2000 bootstrapped samples were estimated to obtain 95% bias-corrected confidence intervals for the indirect effects. The 95% confidence interval for the total indirect effect of socially prescribed perfectionism on distress through self-image and compassionate goals was .03 to .12 and because this interval does not contain zero, the indirect effect was significant. Therefore, Time 2 self-image and compassionate goals mediated the relation between Time 1 socially prescribed perfectionism and Time 2 distress.

Discussion

The cross-sectional links between dimensions of perfectionism and self-image goals across three domains have already been established in the initial two studies. The primary purpose of Study 3 was to expand on Studies 1 and 2 by exploring longitudinally the relations among trait and self-presentational perfectionism, self-image and compassionate goals in the area of self-improvement, as well as both physical and mental health problems. The links between aspects of perfectionism and self-image goals were once again replicated. This study further extended Study 2 by demonstrating that Time 2 self-image goals, as well as compassionate goals, both mediated the longitudinal links between Time 1 socially prescribed perfectionism and Time 2 distress.

Preliminary correlational analyses were conducted at each time point to initially examine the links among the variables of interest. To summarize these results, self-oriented perfectionism, socially prescribed perfectionism, and all facets of perfectionistic self-presentation were positively correlated with self-image goals for self-improvement at each time point. Further, socially prescribed perfectionism and most facets of perfectionistic self-presentation were

positively associated with depression, social anxiety, and loneliness, as well as negatively associated with physical and mental health at each time point. While not a focus of this research, compassionate goals were negatively correlated with depression and loneliness, as well as positively correlated with physical health at Time 2 only; as a result, compassionate goals were included in the subsequent regression analyses involving these three outcome variables.

Next, a series of hierarchical multiple regression analyses were performed to determine if interpersonal perfectionism at Time 1 uniquely predicted Time 2 self-image goals, as well as the indices of physical and mental health at Time 2, while controlling for initial levels of the outcome variables. Self-image goals at Time 1 were included in the regressions predicting Time 2 indices of physical and mental health. As stated above, compassionate goals at Time 1 were also incorporated into the regressions for depression, loneliness, and physical health at Time 2. The results from the regression predicting Time 2 self-image goals replicated and extended the findings from Studies 1 and 2 by showing that perfectionistic self-presentation at Time 1 predicted additional variance in Time 2 self-image goals, over and above the trait perfectionism dimensions at Time 1, and while controlling for Time 1 self-image goals.

In addition, of the regressions predicting Time 2 physical and mental health measures, Time 1 perfectionism dimensions and self-image goals predicted Time 2 social anxiety after controlling for initial levels of social anxiety (i.e., at Time 1), but no individual predictors emerged. Similar results were found for the regression predicting Time 2 loneliness and physical health, with socially prescribed perfectionism at Time 1 emerging as a unique individual predictor of both Time 2 loneliness and Time 2 physical health, over and above initial levels of those outcome variables. Thus, socially prescribed perfectionism at Time 1 was associated with increased loneliness and worse physical health at Time 2. The findings with perfectionism and

social anxiety provide support for models of perfectionism and social anxiety posited by Alden and colleagues (2002) and further extended by Flett and Hewitt (2014). The results from this study also expanded on previous work showing links between dimensions of trait and self-presentational perfectionism and social anxiety (e.g., Nepon et al., 2011), as well as links between socially prescribed perfectionism and loneliness (e.g., Flett et al., 1996) because this study was longitudinal in design. Research on perfectionism and loneliness in particular has been quite limited and further research in this area is warranted. It is also worth noting that compassionate goals at Time 1 uniquely predicted better physical health at Time 2, after controlling for initial levels of physical health, which is a unique finding to our knowledge. These results are in keeping with previous research showing that compassionate goals are linked longitudinally with greater psychological health and well-being (Crocker & Canevello, 2008; Crocker et al., 2010).

Another important goal of the present study was to test self-image goals at Time 2 as a mediator of the associations between Time 1 interpersonal perfectionism and Time 2 physical and mental health problems. Compassionate goals at Time 2 were included as a second mediator due to the significant correlations with lower depression and loneliness, as well as better physical health at Time 2. Several mediational models were tested and the key finding was that self-image and compassionate goals at Time 2 mediated the link between socially prescribed perfectionism at Time 1 and a distress outcome comprising depression, social anxiety, and loneliness at Time 2. This finding replicated and extended the cross-sectional mediational results from Study 2. It was extended by including compassionate goals, which were negatively linked with distress and socially prescribed perfectionism at Time 1 was negatively linked with compassionate goals at Time 2. The small negative link between socially prescribed perfectionism and compassionate

goals was inconsistent with the prior bivariate correlations obtained from Studies 1 and 2, however, it does accord with the negative partial correlation found between socially prescribed perfectionism and compassionate goals for friendships in Study 1 after controlling for self-image goals. The negative link between compassionate goals and distress was consistent with prior research showing that compassionate goals are linked with lower distress (e.g., Crocker & Canevello, 2008). Additional longitudinal research testing self-image and compassionate goals as key mediators is necessary to better understand the results from the current study.

In summary, Study 3 replicated and expanded on the cross-sectional findings from Studies 1 and 2 by showing that there were longitudinal associations between dimensions of perfectionism and self-image goals, this time in the area of self-improvement. Also extending the previous studies, perfectionistic self-presentation at Time 1 predicted unique variance in self-image goals at Time 2, over and above Time 1 trait perfectionism and initial self-image goals. A key finding that emerged from the series of regression analyses was that Time 1 socially prescribed perfectionism uniquely predicted Time 2 loneliness, controlling for initial loneliness. Finally, novel mediational results were found that go beyond the cross-sectional findings from Study 2; specifically, self-image goals as well as compassionate goals mediated the longitudinal link between socially prescribed perfectionism and distress.

Chapter 5

Study 4

The fourth study further extended the first three studies by re-assessing the associations between dimensions of perfectionism and self-image goals from a longitudinal perspective. However, a novel research method was employed in Study 4. Specifically, Study 4 was unique in that it used a weekly diary method over the course of three weeks. The central purpose of this study was to assess weekly diary reports of stressful life events in conjunction with self-reports of trait and self-presentational perfectionism, self-image and compassionate goals in the area of academics, as well as depression. Thus, the present study expanded on the previous cross-sectional studies (Study 1 and Study 2) as well as the longitudinal study with two time points (Study 3) by having three time points, which allowed for the exploration of latent growth curve models. These analyses were performed in order to model longitudinal change over time for self-image goals and depression. In addition, these analyses tested whether interpersonal perfectionism would predict both the initial statuses of self-image goals and depression, as well as any linear change over time that may have occurred.

This study incorporated a weekly diary format that involved supplementing self-reports of goals with student reports of their most stressful life event each week. Each event was then appraised in terms of its unpleasantness, stressfulness, and the extent to which the respondent was bothered by the event. The inclusion of these measures reflected our interest in testing the possibility that perfectionistic students experiencing elevated levels of stress would be more likely to pursue self-image goals. The reasons for including this focus on stress is discussed in more detail below.

In addition to quantitatively examining the event appraisals, a content analysis of the events was conducted at each time point in order to better understand the specific life events that cause university students the most stress.

The theoretical framework for the present study was the diathesis-stress model of perfectionism and psychological distress. Hewitt and Flett (1993) proposed and demonstrated support for this model, which suggests that individuals characterized by vulnerability factors, such as interpersonal perfectionism, are especially likely to experience distress after being exposed to stressors. In two clinical samples, Hewitt and Flett (1993) found that self-oriented perfectionism interacted with achievement stress to predict depression. They also found that socially prescribed perfectionism interacted with interpersonal stress in one sample and achievement stress in the other sample to predict depression.

Subsequently, there has been extensive research establishing links between perfectionism and stress. For example, Molnar and colleagues (2012) found that perceived stress was positively correlated with both self-oriented and socially prescribed perfectionism. Perceived stress was also a mediator of the link between socially prescribed perfectionism and poor health. A more recent study showed that facets of perfectionism were associated with stress reactivity to failure experiences, prolonged stress reactivity, and reactivity to social evaluation (Flett, Nepon, Hewitt, & Fitzgerald, 2016). Another important finding from that study was that stress reactivity mediated the links between dimensions of perfectionism and symptoms of depression.

As noted earlier, the present study extended the diathesis-stress model of perfectionism and distress to include a focus on self-image goals and stress. While much research has explored the links between perfectionism and stress, there has been limited research examining how self-image and compassionate goals relate to stress. In one of the few studies conducted in this area,

Duarte and Pinto-Gouveia (2015) found that self-image goals predicted increased stress symptoms over time, while compassionate goals predicted reduced stress symptoms among university students. The use of a weekly diary format to assess stressful life events is unique to the motivational framework of Crocker and her associates. It is potentially important to determine these links between self-image goals and appraisals of stressful life events because it could further our understanding of the costs of self-image goals. It is our contention that perfectionists who are under stress are especially likely to pursue and be preoccupied with self-image goals. In particular, self-image goals should be elevated among high perfectionistic self-presenters who are under a high amount of stress. Perfectionistic students who feel a lack of controllability over current events may compensate for this situation by becoming even more focused on the pursuit of self-image goals that reflect their self-doubts and personal uncertainties. Implicit in this description is the notion that self-image goals reflect a tendency to over-compensate when there is some degree of ego activation.

It was hypothesized in the current study that stressful events appraised to be more unpleasant, stressful, and having a longer duration would be associated with higher levels of interpersonal perfectionism, self-image goals, and depression. It was also hypothesized that perfectionism would interact with event stressfulness to predict self-image goals. Perfectionistic self-promotion in particular seemed especially likely to combine with event stress to predict self-image goals. Further, latent growth curve modeling was performed to model longitudinal change in self-image goals and depression. It was expected that socially prescribed perfectionism and perfectionistic self-presentation at Time 1 would predict self-image goals, both concurrently and longitudinally, as well as depression. Once again, there were no hypotheses involving compassionate goals and perfectionism due to a lack of a conceptual framework for these links

and because the findings from the previous studies have been inconsistent. Although the results involving compassionate goals and the physical and mental health outcomes have also been mixed, it was hypothesized in the current study that compassionate goals would be negatively associated with event unpleasantness, stressfulness, and duration, given previous findings by Duarte and Pinto-Gouveia (2015).

Method

Participants

Similar to Study 1, Study 2, and Study 3, composite scores were computed for participants who had completed at least 70% of the items on each measure at each time point. Little's MCAR test was not significant at each time point; thus, the values were likely missing in a random way. Once again, missing values were imputed using the expectation-maximization procedure in SPSS. The sample had three time points that were assessed each week. At Time 1, the sample consisted of 155 participants (27 men, 128 women). At Time 2, the sample consisted of 103 participants (14 men, 89 women). At Time 3, the sample consisted of 95 participants (15 men, 80 women). One possible reason for the attrition is that it may have been stressful and draining for students to describe their most bothersome life event each week. In addition, participants received their credit after completing each time point. Perhaps there would have been less attrition if they had received their total credits upon completion of all three time points; however, that would be unethical and against the rules of the undergraduate participant pool that was used.

The mean age of the participants at Time 1 was 19.5 years (SD = 3.4), the mean age at Time 2 was 19.4 years (SD = 3.5), and the mean age at Time 3 was 19.6 years (SD = 3.6). Participants were recruited in the same manner as the previous studies, but unique to this weekly

study, students were asked to participate each week over the course of three weeks. Most of the participants at Time 1 (62.6%) were in their first year of university, with 17.4% in their second year, 6.5% in their third year, 3.9% in their fourth year, and 2.5% in their fifth year or higher. The majority of the participants at Time 2 (65%) were in their first year of university, with 12.6% in their second year, 8.7% in their third year, 5.8% in their fourth year, and 2.9% in their fifth year or higher. Most of the participants at Time 3 (62.1%) were in their first year of university, with 14.7% in their second year, 10.5% in their third year, 5.3% in their fourth year, and 2.1% in their fifth year. Psychology was the most commonly reported intended major, listed by 29.7% of the students at Time 1, 29.1% of the students at Time 2, and 30.5% of the students at Time 3. Kinesiology was another commonly reported intended major, which was listed by 17.4% of the students at Time 1, 15.5% of the students at Time 2, and 14.7% of the students at Time 3.

Procedure

The fourth study involved participants making weekly diary ratings of their stressful life events and mood over the course of three weeks in an online study. Students participated in the first term of the school year from mid-October to early November. They were asked each week to briefly describe the most stressful event or issue that happened to them over the last week. Thus, an event they found to cause them psychological distress as well as their levels of depression were reported at each assessment. Similar research in the perfectionism literature has used this diary method (e.g., Dunkley, Zuroff, & Blankstein, 2003; MacKinnon et al., 2014). Participants also completed various self-report measures presented in counterbalanced order at the beginning of the 3-week period. A similar study conducted by Moeller, Crocker, and Bushman (2009) assessed weekly measures over the course of 10 weeks, including self-image

goals. The implication of this study is that the self-image goals and perfectionism links will be particularly relevant when stress is being experienced and they are distressed by the stressful events in their lives.

Measures

The Multidimensional Perfectionism Scale, the Perfectionistic Self-Presentation Scale, the Compassionate and Self-Image Goals Scale in the area of academics, as well as a 10-item short form of the Center for Epidemiological Studies-Depression Scale (CES-D 10; Andresen, Malmgren, Carter, & Patrick, 1994) were administered to the participants at Time 1; these measures have already been discussed in detail. The MPS and PSPS were only assessed at Time 1 because perfectionism is considered to be stable over time (Cox & Enns, 2003). The other measures listed above were assessed at Times 2 and 3, as well.

The following additional self-report measures were administered to the participants at each time point:

Event appraisal (Dunkley et al., 2003). Once participants described the most stressful life event at each time point, they were asked three questions concerning this event. To assess unpleasantness of the event, they were asked, "How unpleasant was the event or issue to you?" on a scale from 1 (*Not at all*) to 7 (*Very much*). Using that same Likert scale, participants were asked, "How stressful would you rate the event or issue?" to assess event stressfulness. Higher scores on these two items indicated higher levels of event unpleasantness and stressfulness, respectively. Finally, they were asked, "For how long were you bothered by the event or issue?" to assess event duration. This item was rated on a scale from 1 (*A very brief amount of time*) to 7 (*A very large amount of time*), with higher scores indicating a longer duration in which they were bothered by the event.

Results

Descriptive Statistics

Table 18 presents the means, standard deviations, and alpha coefficients for all measures separately for each of the three time points. Tests of sex differences in terms of mean levels of each variable at all time points were performed. At Time 1, depression, $t(42.62) = -2.55$, $p < .05$, differed significantly in men and women, whereby women had higher levels of depression compared to men. Also at Time 1, women had appraised the event as being significantly more unpleasant, $t(34.61) = -2.41$, $p < .05$, stressful, $t(37.56) = -2.37$, $p < .05$, and the event bothered them for a longer duration, $t(39.07) = -2.74$, $p < .01$, compared to men. There were no gender differences in terms of the mean levels of each variable at Time 2. At Time 3, compassionate goals, $t(28.06) = -2.32$, $p < .05$, differed significantly in men and women, whereby women had a higher frequency of compassionate goals compared to men. Also at Time 3, women had appraised the event as significantly more unpleasant, $t(19.27) = -2.47$, $p < .05$, stressful, $t(18.72) = -2.53$, $p < .05$, and the event bothered them for a longer duration, $t(18.52) = -3.03$, $p < .01$, compared to men.

A series of t-tests was performed to determine if there were any significant differences in terms of the mean levels of all of the variables of interest among those who remained in the study versus those who dropped out. More specifically, four different groups were compared with each other: (a) Persistors were those who remained in the study for all time points; (b) Drop-Outs at Time 1 were those who dropped out after Time 1; (c) Drop-Outs at Time 2 were those who dropped out after Time 2; and (d) Returnees were those who participated at Time 1, then dropped out at Time 2, but returned at Time 3. There were 51% of the participants in the Persistors group, who completed all time points; 26.5% of the participants dropped out after Time 1; 14.8%

dropped out after Time 2; and 7.7% were Returnees who completed Times 1 and 3. There were no significant differences between any of the groups on any variables.

Content Analyses

A content analysis was performed on the most stressful/bothersome events reported by participants at each time point. Table 19 presents a summary of the frequencies of each event-related stressor within each category at each time point.

Content Analysis of Reported Events at Time 1. At Time 1, the majority of the participants (90 out of 155) had reported that the most stressful event they had experienced over the past week was related to academics. A recurring theme in the responses was difficulties with time management and having too many assignments and tests to balance. Some examples of having too much schoolwork to do and finding it challenging to get everything done on time included: "Studying for back to back midterms and finding time for it in my busy schedule," "Studying for 3 different tests all on the same day," "Time management due to multiple tests during the course of a couple weeks," and "I had 2 midterm exams on the same day that I hadn't studied for before the day. I had only gotten a couple hours of sleep the night before and I had to be at school for classes from 8:30am to 9pm." Another theme pertaining to the broad domain of academics was having difficulty with the actual coursework, whether it was difficulty focusing (e.g., "I have an essay due tomorrow that I had not been able to focus entirely on") or not adequately grasping the material (e.g., "Studying for a test where I did not understand the course material or course readings and none of the information I was studying was staying in my head"). Some participants also reported being disappointed with their performance in university: "Failing my calc and chem tests" and "I received one of my grades from a test I did weeks ago I was very surprised with the results it was the worst grade I ever got in my life it was the most

stressful week of my life I felt so ashamed of myself, I regretted why I wasted time while I could hve [sic] Been studying for my test").

While most of the events described were related to academics, 17 students reported an event in the area of interpersonal relationships. These included conflicts with family members, friends, or romantic partners: "argument with parents about reorganizing course schedule" and "A huge fight with my boyfriend." Events in the interpersonal domain also included feelings of loneliness due to a lack of connections with others: "On a particular day, I saw a lot of couples (more than usual) who were having fun together and really enjoying each others [sic] presence. They were kissing and laughing and all the rest. It made me feel really lonely because I am single, and haven't really conected [sic] with anyone like that in my first few months of university. This caused me a lot of stress, even though I am not sure why. I guess I felt I was not fitting in."

In addition, there were three people who reported a job-related event (e.g., "I had to figure out if I would be able to take on a part time or seasonal job. and if so where") and another three students who reported concerns with money (e.g., "The most stressful issue I've had this week has been money management"). There were also three students who reported a health problem or illness as their event (e.g., "While working out at the gym I hurt my previously injured knee. The pain is very stressful to deal with as well as trying to find time to go to the doctors and rest").

There were 29 participants who reported a combination of factors that they considered to be stressful. Similar to events in the academics domain, the major theme throughout all of these responses was having difficulty balancing the many aspects of their lives. Some examples included "Midterms, MCAT studying, and the illness of a family member. Combined all together

made it feel like there was no hope for the future," "Unable to fall asleep due to stress of school work and studying for upcoming exams while accommodating church activities in my life," and "balancing school, 2 jobs and Master's applications." There were four students who reported an event that could be categorized as a daily hassle, such as "My family lost internet and this made me feel very stressed as a lot of my work is reliant on it." Lastly, three students reported that they did not experience a stressful event that week and three left the space blank, which could mean they either did not experience a stressful event or they did not wish to disclose such an event.

Content Analysis of Reported Events at Time 2. Like at Time 1, many of the students (60 out of 103) reported stressful/bothersome events in the area of academics at Time 2. A theme that emerged in this domain once again was the challenge of having several different assignments and tests around the same time and also not getting enough sleep; examples included "Trying to find time to study for 3 tests and write an essay in time for their deadlines," "studying for 3 midterms in 1 day," "Last week I had to hand in an assignment as well as do a lot of other work for different classes and it really got overwhelming," and "Trying to complete my essays, assignments and studying for my test within one week. All my assignments and tests were one day after another. I had lack of sleep." Moreover, students reported events related to being disappointed with their academic performance (e.g., "The most stressful thing that happened to me over the last week was probably finding out my grades so far are fairly bad and I need to study and work a lot harder on all my assignments due in the next few weeks").

Additionally, there were nine students who reported interpersonal events that were causing them stress. These included conflicts with others (e.g., "Argument with parents"), as well as feelings of loneliness (e.g., "I was a bit stressed with my family issues as I am an international student and I don't have my parents over here with me"). There were four students

who reported a job-related event (e.g., “Working 20 hours between two different jobs over the weekend”) and two students reported an event related to their health (e.g., “I had to go to the doctor's to get something checked out. Took a few tests but won't know the results until next week. The possibilities of what it can be are very life changing as well as relationship changing”).

There were 16 students who reported a combination of events that were bothering them. Like at Time 1, most of these events reflected the theme of difficulty balancing different aspects of their lives; examples included “managing time between going out with friends and having fun and studying” and “Balance of Volunteer and School responsibilities and doubt about job outcome.” There were five students who reported an event that could be categorized as a daily hassle, such as “I had a G2 test and it was too stressful.” Lastly, there were two students who reported that nothing stressful happened that week and five students left the space blank.

Content Analysis of Reported Events at Time 3. Once again, the most commonly reported type of event at Time 3 was academic, with 48 out of 95 students reporting this type of event. Similar themes emerged with too much schoolwork to balance as a recurring concern among students (e.g., “The amount of readings to be completed”). Other themes were having difficulty with certain subjects at university (e.g., “Completing a very difficult biology lab report”) and being disappointed with one’s performance (e.g., “Finding out I failed a test”).

There were 10 students who reported an interpersonal event; some were related to conflicts with loved ones (e.g., “Having a major fight with the girlfriend which is always very stressful...”) or feeling disconnected from a loved one (e.g., “Having a hard time communicating with my boyfriend who's long distance”). There were three job-related events that were reported

(e.g., “Dealing with an assistant manager that makes you anxious even though it is not necessary because I was doing my job right”), and another three health-related events (e.g., “being sick”).

In addition, there were 15 students who reported a combination of factors that were stressful over the past week. Once again, the theme of time management and balance came into play (e.g., “Managing time for my studies and priorities for school as well as personal obligations”). There were eight reported events that could be categorized as either a daily hassle or “other” (e.g., “eating healthy”). Lastly, there were two students who reported that nothing stressful happened to them that week and six students who left the space blank.

Correlational Analyses

Time 1 Correlational Analyses. Table 20 displays the Time 1 correlations among trait and self-presentational perfectionism, self-image and compassionate goals in the area of academics, depression, event unpleasantness, event stressfulness, and event duration. Self-oriented perfectionism, socially prescribed perfectionism, and all facets of perfectionistic self-presentation were all positively correlated with self-image goals in the area of academics. These same trait and self-presentational dimensions of perfectionism were correlated with higher levels of depression. Only nondisplay of imperfection was positively associated with event unpleasantness. Self-oriented perfectionism, perfectionistic self-promotion, and nondisplay of imperfection were all linked with higher ratings of event stressfulness and longer duration of being bothered by the event.

In addition, self-image goals in the area of academics were positively linked with compassionate goals in the area of academics, as well as with depression and event stressfulness. Compassionate goals for academics were positively associated with ratings of event

unpleasantness and stressfulness. Lastly, depression was positively correlated with ratings of event unpleasantness, stressfulness, and longer duration of being bothered by the event.

Time 2 Correlational Analyses. Table 21 displays the Time 2 correlations among self-image and compassionate goals in the area of academics, depression, event unpleasantness, event stressfulness, and event duration. Self-image goals for academics were positively correlated with compassionate goals for academics. Self-image goals were also correlated with higher levels of depression. Further, depression was positively associated with ratings of event stressfulness and longer duration of being bothered by the event.

Additional correlations were conducted to examine the links between Time 1 perfectionism dimensions and Time 2 self-image goals. The results indicated that Time 1 self-oriented perfectionism ($r = .24$, $p < .05$) and socially prescribed perfectionism ($r = .32$, $p < .01$) were both positively correlated with Time 2 self-image goals. Moreover, Time 1 perfectionistic self-promotion ($r = .36$, $p < .01$), nondisplay of imperfection ($r = .31$, $p < .01$), and nondisclosure of imperfection ($r = .27$, $p < .01$) were all associated with higher self-image goals at Time 2.

Time 3 Correlational Analyses. Table 22 displays the Time 3 correlations among self-image and compassionate goals for academics, depression, event unpleasantness, event stressfulness, and event duration. Self-image goals were positively correlated with compassionate goals, which is consistent with the prior findings from all of the present studies as well as the literature (e.g., Crocker & Canevello, 2008). Additionally, compassionate goals were positively associated with ratings of event unpleasantness and stressfulness. Finally, depression was positively linked with ratings of event unpleasantness, stressfulness, and longer duration of being bothered by the event.

Additional correlations were conducted to explore the relations between the Time 1 perfectionism dimensions and Time 3 self-image goals. The results revealed that Time 1 self-oriented perfectionism ($r = .34$, $p < .01$) and socially prescribed perfectionism ($r = .23$, $p < .05$) were positively correlated with Time 3 self-image goals. Also, Time 1 perfectionistic self-promotion ($r = .41$, $p < .01$), nondisplay of imperfection ($r = .32$, $p < .01$), and nondisclosure of imperfection ($r = .40$, $p < .01$) were all positively associated with Time 3 self-image goals.

Moderation Analyses

A series of moderation analyses were conducted in order to determine if dimensions of trait and self-presentational perfectionism would interact with event stressfulness to predict self-image goals. These analyses were performed concurrently at Time 1 because it had the largest sample and the perfectionism dimensions were only assessed at this initial time point. None of these moderation analyses were significant and, thus, perfectionism did not interact with event stressfulness to predict self-image goals in the present study.

Multilevel Modeling

Multilevel modeling was performed using covariance structure analysis (see Singer & Willet, 2003 for a discussion), which is also known as latent growth curve modeling. This type of analysis was used because some of the measures were assessed at three different time points; specifically, the variables of interest were self-image goals and depression. One of the advantages of using multilevel modeling is that there is no need to assume sphericity. Another advantage of multilevel modeling is the handling of missing data, provided that the data is missing at random, which had already been established. Kreft and de Leeuw (1998) have recommended that for multilevel modeling, there should be at least 20 Level 2 units, and the sample size for this study is much higher than that. However, because structural equation

modeling was used to model longitudinal change, a larger sample size of participants who completed each time point would have been ideal. Latent growth curve modeling enabled us to examine intra-individual change over time, in addition to inter-individual variability in intra-individual change (Preacher, Wichman, MacCallum, & Briggs, 2008).

All subsequent analyses were performed with maximum likelihood models using AMOS. Maximum likelihood estimation was used instead of restricted maximum likelihood because maximum likelihood is generally better for estimating the fixed regression coefficients (Twisk, 2006), which was a primary interest in the present study. Additionally, parameters were estimated using all available data from the participants, including those with missing data. Within each individual, it was expected that socially prescribed perfectionism and perfectionistic self-presentation would be associated with self-image goals and depression. Prior to conducting these analyses, the normality of the outcome variables (i.e., self-image goals and depression) were screened at each time point and all of the outcomes at each time point were normally distributed. Lastly, the predictor variables were grand mean centered before performing the analyses.

Latent Growth Curve Model with Self-Image Goals. First, an unconditional latent growth curve model was performed using maximum likelihood with self-image goals at each time point. The values of 0, 1, and 2 that were assigned to the Slope parameters reflect Weeks 1, 2, and 3, respectively. This model was an excellent fit to the data, χ^2 (3) = 0.72, p = .868, CFI = 1.00, TLI = 1.04, RMSEA = .00, 90% CI = .00, .07, p_{close} = .920. The variance of the Intercept was significant (0.25, $p < .001$), which reveals that there were strong inter-individual differences in the initial scores of self-image goals at Time 1. However, the variance of the Slope was not significant (0.02, p = .183), which indicates that there were not significant inter-individual

differences in the change over time of the self-image goals scores. Turning to the means estimates, the parameters for both the Intercept and Slope were statistically significant. Specifically, the average score for self-image goals was 3.28, $p < .001$. In addition, the value for the Slope (-.14, $p < .001$) was significant and negative, indicating that the average self-image goals scores decreased over time by 0.14 units for every week. Lastly, the correlation between the Intercept and the Slope was not significant.

Next, a conditional latent growth curve model was performed with the addition of a time-invariant predictor of both Intercept and Slope: an interpersonal perfectionism latent factor comprising socially prescribed perfectionism and all three facets of perfectionistic self-presentation. This predictor is time-invariant because it was assessed at Time 1 and is assumed not to change over the course of the three weeks. Evidence for this stability over time was found in Study 3, with paired samples t-tests showing that there were no significant differences between Time 1 and Time 2 for each of the perfectionistic self-presentation facets. Further, research has demonstrated the temporal stability of the subscales of the MPS (Hewitt & Flett, 1991), as well as the PSPS (Hewitt et al., 2003). Because of using covariance structure analysis to model longitudinal change, we were able to use a latent predictor variable. This model was also an excellent fit to the data, χ^2 (15) = 22.34, $p = .099$, CFI = .98, TLI = .97, RMSEA = .06, 90% CI = .00, .10, $p_{close} = .374$. All of the factor loadings for interpersonal perfectionism were .59 or higher. The variance of interpersonal perfectionism was significant (48.60, $p < .001$) and, therefore, there were strong inter-individual variability in terms of interpersonal perfectionism scores at Time 1. The variance of the Intercept was also significant (0.14, $p < .001$), which reveals that there was substantial heterogeneity in the initial status of self-image goals that was not explained by the predictor. The variance of the Slope was not significant

(0.02, p = .181), demonstrating that there was not substantial heterogeneity in the linear change in self-image goals that was not explained by the predictor. Furthermore, interpersonal perfectionism was a significant predictor of the Intercept (ß = .68, p < .001), which shows that interpersonal perfectionism at Time 1 was a predictor of higher levels of the initial status of self-image goals. However, interpersonal perfectionism did not significantly predict the Slope (ß = -.06, p =.794), which shows that interpersonal perfectionism at Time 1 did not significantly predict the rate of change in self-image goals. Turning to the means estimates, the parameters for both the Intercept and Slope were statistically significant after controlling for interpersonal perfectionism at Time 1, with the same values as the initial model. Lastly, the correlation between the Intercept and the Slope was not significant. This final latent growth curve model is depicted in Figure 9. It is worthwhile to note that when self-oriented perfectionism was added to this model as a time-invariant predictor, it did not significantly predict the Intercept or the Slope of self-image goals; thus, it was excluded from the final model.

Latent Growth Curve Model with Depression. First, an unconditional latent growth curve model was conducted using maximum likelihood with depression at each time point. The values of 0, 1, and 2 that were assigned to the Slope parameters reflect Weeks 1, 2, and 3, respectively. This model was an adequate fit to the data, χ^2 (3) = 10.70, p = .013, CFI = .95, TLI = .89, RMSEA = .13, 90% CI = .05, .22, p_{close} = .047. The RMSEA tends to over-reject models with smaller sample sizes, which might explain why it rejected the null hypothesis in this model; however it was very close to not being rejected; also, the RMSEA can be misleading when the degrees of freedom are small. The variance of the Intercept was significant (29.26, p < .001), which shows that there were strong inter-individual differences in the initial scores of depression at Time 1. However, the variance of the Slope was not significant (0.47, p = .704), which reveals

that there were not significant inter-individual differences in the change over time of the depression scores. Turning to the means estimates, the parameter for the Intercept was significant. Specifically, the average score for depression was 12.71, $p < .001$. However, the Slope was not significant, with an average score of -.20, $p = .404$, indicating that there was not a significant change over time in depression scores from Week 1 to Week 3. Lastly, the correlation between the Intercept and the Slope was not significant.

Next, a conditional latent growth curve model was conducted with the addition of the same time-invariant predictor of both Intercept and Slope (i.e., interpersonal perfectionism factor from the previous model). Because the Slope was not significant in the previous unconditional latent growth curve model, interpersonal perfectionism at Time 1 was not expected to be linked with the rate of change; however, this nonsignificant direct path was still included in the model since the model was a slightly better fit than when there was no path. The primary goal here was to determine if statistically significant heterogeneity in the initial status of depression (i.e., Intercept) could be explained by interpersonal perfectionism at Time 1 as a potential predictor. The predictor variable of interpersonal perfectionism at Time 1 was incorporated into the Level 2 (or structural) component of the model. This model was an adequate fit to the data, χ^2 (15) = 35.52, $p = .002$, CFI = .95, TLI = .92, RMSEA = .09, 90% CI = .05, .14, $p_{close} = .036$. All of the factor loadings for interpersonal perfectionism were .61 or higher. The variance for interpersonal perfectionism was significant (50.52, $p < .001$), demonstrating that there was strong inter-individual variability in interpersonal perfectionism scores at Time 1. The variance of the Intercept was significant (16.75, $p < .001$), which indicates that there was substantial heterogeneity in the initial status of depression that was not explained by the predictor. The variance for the Slope was not significant (0.27, $p = .826$), indicating that there was not

significant heterogeneity in the linear change in depression that was not explained by the predictor. Interpersonal perfectionism significantly predicted the Intercept (ß = .65, $p < .001$), which demonstrates that interpersonal perfectionism at Time 1 is a significant predictor of the initial status of depression; that is, interpersonal perfectionism at Time 1 was associated with higher levels of depression at baseline. However, interpersonal perfectionism did not significantly predict the Slope (ß = -.65, p =.089), which means that interpersonal perfectionism at Time 1 did not predict the rate of change in depression scores. Turning to the means estimates, the parameter for the Intercept was significant (12.71, $p < .001$), after controlling for interpersonal perfectionism at Time 1. The parameter for the Slope was not significant, with an average score of -.21, $p = .382$, indicating that there was not a significant change over time in depression scores. The Intercept and the Slope were not significantly correlated with each other. This final latent growth curve model is depicted in Figure 10. It is worthwhile to note that when self-oriented perfectionism was added to this model as a time-invariant predictor of both the Intercept and Slope, the model was a worse fit and as a result, self-oriented perfectionism was not included in this model.

Discussion

Study 4 expanded on the previous longitudinal study by including an additional third time point, allowing for latent growth curve modeling. This study also employed a novel weekly diary method in order to better understand the stressful life events that students experienced every week. Dimensions of perfectionism were once again positively associated with self-image goals, this time in the area of academics. Thus, all four studies collectively provide evidence for the usefulness of a motivational approach to understanding perfectionists and why they are so driven. Another key finding was that self-image goals decreased each week and while

interpersonal perfectionism at Time 1 did not predict this rate of change over time, this predictor variable did predict the initial status of self-image goals.

The main goal of the present study was to longitudinally assess the associations among dimensions of perfectionism, self-image and compassionate goals for academics, stressful life events, and psychological distress. A unique component of this study was that weekly assessments were conducted over three weeks to get multiple assessments of self-image and compassionate goals, as well as weekly stressful events and appraisals of these events, and depression.

The results from a qualitative content analysis of the reported stressful/bothersome events from each week revealed that the majority of the students experienced difficulty in the broad area of academics. Within this domain, students had difficulty with balancing all of their coursework and balancing university with the other aspects of their lives (e.g., work and relationships). Some students also were disappointed by their academic performance and had challenges with the course material. Even though the majority of students were stressed with academics, there was still heterogeneity among the students in terms of the range of events that were reported on. For instance, other students experienced stress with interpersonal relationships, their jobs, and health problems. Some students reported a combination of different stressors.

Correlational analyses were conducted within each time point and consistent with the previous three studies, self-image goals were positively linked with self-oriented perfectionism, socially prescribed perfectionism, and perfectionistic self-presentation at Time 1, which was the only time when perfectionism was assessed. Also at Time 1, nondisplay of imperfection was linked with event unpleasantness; self-oriented perfectionism, perfectionistic self-promotion, and nondisplay of imperfection were linked with higher event stressfulness and a longer duration of

being bothered by the event. Self-image goals for academics were linked with higher levels of depression at Times 1 and 2, as well as higher event stressfulness at Time 1 only.

Although they were not a main focus of this study, compassionate goals were linked with higher event unpleasantness and event stressfulness at both Times 1 and 3. These findings were unexpected given the literature on compassionate goals being related to greater psychological well-being and reduced stress (Crocker & Canevello, 2008; Duarte & Pinto-Gouveia, 2015). However, these positive correlations between compassionate goals and event unpleasantness and stressfulness seem to accord with the previous findings from Study 2 linking compassionate goals with higher student burnout. Perhaps being focused on compassionate goals in the area of academics means that there is less time to spend on personal schoolwork and, thus, students are more likely to rate their stressful events as more unpleasant and stressful. Further research is needed in order to better understand these unexpected findings.

Another goal of the present study was to explore if there was significant change in self-image goals for academics and depression over time through latent growth curve modeling. Separate unconditional latent growth curve models were first performed with self-image goals and depression at each time point. The model with self-image goals was an excellent fit and there were substantial inter-individual differences in the initial status of self-image goals. The Intercept was significant, as well as the Slope, which demonstrated that the average scores of self-image goals decreased each week. Separate conditional latent growth curve models were then conducted with an interpersonal perfectionism latent factor assessed at Time 1 added as a predictor of both Intercept and Slope. The model with interpersonal perfectionism as a predictor and self-image goals was an excellent fit and substantial inter-individual variability in interpersonal perfectionism scores was found. Interpersonal perfectionism also significantly

predicted self-image goals at baseline, but did not significantly predict the rate of change in self-image goals. In general, these findings are consistent with the results from Studies 1-3, particularly with Studies 2 and 3 because those studies examined the links between the same interpersonal perfectionism latent factor and self-image goals. In the present study, interpersonal perfectionism was significantly linked with self-image goals in the area of academics.

Moreover, the unconditional latent growth curve model with depression at each time point was an adequate fit, and substantial inter-individual differences in the initial status of depression were found. The parameter estimate for the Intercept was still significant after controlling for initial levels of interpersonal perfectionism, but the Slope was not significant; thus, there was not a significant rate of change in depression scores over time. A conditional latent growth curve model with interpersonal perfectionism at Time 1 as the predictor was still performed to explore if significant heterogeneity in initial levels of depression could be explained by the predictor. This model was also an adequate fit, and interpersonal perfectionism did significantly predict the initial levels of depression. The parameter estimate for the Intercept was also significant after controlling for Time 1 interpersonal perfectionism. These findings are in keeping with the results from Study 3, as well as the considerable prior research showing consistent links between dimensions of perfectionism and depression (e.g., Hewitt et al., 2003; Nepon et al., 2011; Sherry et al., 2008).

This study also included measures of stressfulness because of the presumed relevance of stress in the association between perfectionism and depression, and it enabled us to evaluate whether perfectionism combined with stress to predict a more extreme focus on self-image goals. Analyses did not provide support for this possibility. Given that correlational analyses suggested that there is little overlap between goal and stress measures, one interpretation of this pattern of

results is that the experience of stress and the pursuit of self-image goals represent different pathways when conceptualizing the extent to which perfectionistic students are vulnerable to distress.

Still, at a conceptual level, it seems reasonable that highly perfectionistic students who are experiencing stress and associated feelings of uncontrollability will become more defensive in ways that make them even more likely to pursue self-image goals, and Study 4 did yield some evidence of a link between self-image goals and perceived stressfulness. Accordingly, future research should re-assess this issue, and this work should go beyond self-report measures and examine goal appraisals and goal strivings when perfectionistic students are placed in ego-threatening situations that could make self and identity concerns more salient for them. It may be the case that the nature of the stress matters; for instance, individuals high in perfectionistic self-presentation would turn to self-image goals after experiencing a public humiliation, such as making a big mistake everyone knows about.

Chapter 6

General Discussion

The primary purpose of the current research was to illuminate the motivational aspects of perfectionism from a perspective that reflects the tendency for perfectionism to be linked inextricably with elements of the self, including self-doubts and desires. Specifically, a series of four studies explored the extent to which students with high levels of trait and self-presentational perfectionism were motivated by the tendency to pursue goals related to maintaining and defending desired self-images. It was found across four studies of university students that trait and self-presentational components of perfectionism were associated consistently with self-image goals across three different domains (i.e., academics, friendships, and self-improvement). This was the first set of studies to initially examine the associations that dimensions of trait and self-presentational perfectionism have with self-image and compassionate goals in various domains.

While the first two studies were cross-sectional in design, Studies 3 and 4 evaluated trait perfectionism, perfectionistic self-presentation, and self-image goals from a short-term longitudinal perspective. Study 3 assessed interpersonal perfectionism, self-image and compassionate goals, and psychological distress at two different time points. Study 4 was distinct in that it expanded on the prior findings by assessing the outcomes on a weekly basis over the course of three weeks, which enabled the use of latent growth curve models. Study 4 was also unique in that it involved students to describe and appraise the most stressful or bothersome life event they had experienced each week and the correlations between these event appraisals and aspects of perfectionism, self-image goals, and depression were explored.

Analyses with the MPS showed that both self-oriented perfectionism and socially prescribed perfectionism were associated to a comparable degree with self-image goals in both correlational and regression analyses. This consistent pattern of findings is noteworthy in several key respects. First, in keeping with earlier observations by classic theorists, these results qualify existing research on the link that perfectionism has with goals and motives by establishing that attempts to understand the motivationally driven tendencies of perfectionists must take into account their chronic focus on the self and the dissatisfaction and self-doubt that is found so commonly among perfectionists. Hence, perfectionists are more likely to be particularly susceptible to the paradoxical effects of pursuing self-image ideals.

Second, the consistent links found between self-image goals and both self-oriented perfectionism and socially prescribed perfectionism in the current research is noteworthy because it has been firmly established in earlier motivational research that self-image goals are highly counterproductive and lead to many negative outcomes (e.g., Canevello & Crocker, 2011; Crocker, Olivier, & Nuer, 2009; Moeller & Crocker, 2009), and it follows that the pursuit of self-image goals is one of the processes that likely contributes to the negative consequential outcomes experienced by many perfectionists. For instance, a recent analysis led to the conclusion that the various trait dimensions are associated with pathological narcissism (Flett, Sherry, Hewitt, & Nepon, 2014) and the pursuit of self-image goals is also implicated directly in narcissism (Moeller et al., 2009), so it seems evident that the tendency to endorse and pursue self-image goals likely play a central role in the difficulties of narcissistic perfectionists.

One possible avenue for future research is to explore how self-image and compassionate goals are associated with a novel measure of narcissistic perfectionism. This new scale known as the Big Three Perfectionism Scale was created to assess three higher-order global factors of

dispositional perfectionism: rigid perfectionism, self-critical perfectionism, and narcissistic perfectionism (Smith, Saklofske, Stoeber, & Sherry, 2016). While all three of these factors would be important to assess in terms of their links with self-image goals, it would be especially pertinent to focus on narcissistic perfectionism. This higher-order factor is composed of four core perfectionism facets: other-oriented perfectionism (e.g., "It is important to me that other people do things perfectly"); hypercriticism (e.g., "I am highly critical of other people's imperfections"); entitlement (e.g., "It bothers me when people don't notice how perfect I am"); and grandiosity (e.g., "Other people secretly admire my perfection"). Narcissistic perfectionists are likely to be quite psychologically vulnerable but also grandiose in their goals and projected self-image in ways that are consistent with descriptions of an "egosystem."

Past theorists have suggested that perfectionistic people generate stress for themselves (see Hewitt & Flett, 2002). People high in interpersonal perfectionism generate stress in the form of interpersonal conflict, and it seems likely that hypercompetitive perfectionists who tenaciously pursue self-image goals will have a form of self-focused preoccupation that alienates other people in ways that are consistent with Crocker's discussion of self-image goals as components of a broader "egosystem" (see Crocker & Canevello, 2012).

The results also established, as expected, that the various facets of perfectionistic self-presentation were linked with self-image goals. This is in keeping with evidence that links more general forms of self-presentation with self-image goals (Hadden et al., 2014). Supplementary analyses showed that the association between self-image goals and perfectionistic self-presentation was robust enough to still be evident after taking into account the consistent associations that trait perfectionism dimensions had with self-image goals. Both perfectionistic self-promotion and nondisplay of imperfection emerged as unique individual predictors of self-

image goals in regression analyses. On the surface, it is not surprising that people who have an abiding need to seem perfect operate according to self-image goals, given that self-image goals arise out of our desires to manage the impressions that other people have of us. It is useful to consider these findings from the perspective of the key distinction that Cantor (1990) made between "having versus doing," which was described earlier. In the current instance, it was established that emerging adults who have an enduring need to appear perfect report that they have been pursuing self-image goals throughout the previous week, and these self-image goals are evident in terms of the academic and friendship domains and in terms of their quest for self-improvement.

While this research has focused primarily on developing a better understanding of perfectionism through research on self-image goals, it is important to note that the current findings also have some clear implications for our understanding of the nature of self-image goals. It is generally accepted that people dominated by self-image goals are fuelled by a need to construct desired images, but our findings signify that for many emerging adults, the desired image they seek to convey is not simply the image of being a good person; rather, they are trying to construct an image of being a perfect, flawless person. This extreme version of the pursuit of self-image goals should be especially unsettling for the friends and peers who encounter such people, especially if these friends and peers are influenced by social comparison cues and use these cues as a basis for self-evaluation. A potentially useful avenue for future research is to examine social reactions to people who are characterized as pursuing self-image goals.

The self-image goal measures used in the present research were developed by Crocker and her associates; they assessed self-image goals by constructing a balanced number of scale items tapping an approach orientation (e.g., convince someone you are right about something)

versus an avoidance orientation (e.g., avoid showing weaknesses). This distinction is similar to having a promotion orientation versus a prevention orientation (see Higgins, 1998; Higgins & Spiegel, 2004). This distinction is incorporated into the subscales of the Perfectionistic Self-Presentation Scale, which reflect self-promotion and self-defensiveness. The main analyses reported earlier focused on overall self-image goal scores, but exploratory analyses were also performed with the subset of items that tapped approach versus avoidance self-image goals. These analyses showed consistently that trait perfectionism and perfectionistic self-presentation were associated jointly with approach-oriented and avoidance-oriented self-image goals. This is worth noting given the description of perfectionistic overstrivers as people who are jointly concerned with approaching perfection while avoiding failure, and this can become expressed in an approach-avoidance conflict (see Covington, 2000). Given this joint emphasis on approach and avoidance, it seems particularly important to take situational contexts and life situations into account when seeking to understand individual perfectionists and predicting the specific behaviours and tendencies that will express. The perfectionistic person who is faced chronically with threatening situations or who has experienced a series of setbacks including achievement failures should be exhibiting characteristics more in keeping with an avoidance orientation and needs to protect the self and perhaps escape unfavourable situations. In contrast, an approach orientation should be more evident when perfectionists are doing reasonably well and they have a self-confidence that helps them to pursue less defensive self-image goals.

A related purpose of the current research was to explore the extent to which people with elevated levels of perfectionism are characterized by theoretically relevant personality variables, including social comparison, self-silencing, public and private self-consciousness, and both validation and growth seeking. Several mediational tests were also performed to examine if any

of the theoretically relevant personality variables would help to account for the tendency of perfectionists to pursue self-image goals. The results from Study 1 indicated that self-oriented perfectionism, socially prescribed perfectionism, perfectionistic self-promotion, nondisplay of imperfection, and self-image goals in the areas of academics and friendships were all positively linked with social comparison, total self-silencing, and both private and public self-consciousness. The results from Study 2 revealed that self-oriented perfectionism was positively linked with growth seeking, in contrast to nondisclosure of imperfection, which was negatively linked with growth seeking. In addition, self-oriented perfectionism, socially prescribed perfectionism, and perfectionistic self-presentation were all substantially linked with validation seeking. These findings are consistent with prior research demonstrating the links between dimensions of perfectionism and both growth and validation seeking (Flett et al., 2014; Hill et al., 2010).

We further tested whether social comparison, self-silencing, and public self-consciousness would mediate the link between interpersonal perfectionism and self-image goals in Study 1. These results indicated that social comparison mediated the link between interpersonal perfectionism and self-image goals, thus furthering our understanding of the associations established in this first study. We extended the findings in Study 2 by showing that validation seeking mediated the links between components of perfectionism and self-image goals. Taken together, the results from Studies 1 and 2 imply that certain perfectionists are chronically focused on self-image goals and this stems, in part, due to a need for validation and a need to compare oneself with others.

An important area for future research is to investigate other potential mediators of the associations between dimensions of perfectionism and self-image goals to advance our

understanding of the consistent links established in the present research. For instance, mindfulness could be tested as a mediator of the link between perfectionism and self-image goals. Recently, self-image goals in the area of friendships were found to be negatively associated with a total mindfulness score and various facets of mindfulness across three studies (Stewart, Ahrens, & Gunthert, 2017). One of these studies was longitudinal in design and Stewart et al. (2017) demonstrated that total mindfulness predicted increased self-image goals as well as decreased compassionate goals. Perhaps, mindfulness could help to explain some of the links found in the current research between aspects of perfectionism and self-image goals, as well as compassionate goals.

Moreover, in the present research, self-image goals were examined as a key mediator of the association between interpersonal perfectionism and well-being in Studies 2 and 3. Self-image goals mediated the links between interpersonal perfectionism (i.e., socially prescribed perfectionism and perfectionistic self-presentation) and both depression and student burnout in Study 2. In addition, self-image goals as well as compassionate goals mediated the link between Time 1 socially prescribed perfectionism and Time 2 psychological distress in Study 3. These findings provide further support for the Perfectionism Social Disconnection Model.

Study 2 investigated how dimensions of perfectionism and self-image goals were associated with depression and student burnout. The results showed that self-oriented perfectionism, socially prescribed perfectionism, perfectionistic self-presentation, and self-image goals in the area of self-improvement were all related to more depressive symptoms. These findings are in keeping with previous research showing the links that facets of trait and self-presentational perfectionism and self-image goals have with depression (Crocker & Canevello, 2008; Nepon et al., 2011). All trait and self-presentational perfectionism dimensions were

associated with emotional exhaustion, and socially prescribed perfectionism and perfectionistic self-presentation were also linked with cynicism. These results extend the extremely limited research exploring perfectionism and academic burnout, thus expanding prior research in this area, which has mostly focused on other forms of distress such as depression. Additionally, much of the research in the perfectionism and burnout literature has assessed burnout in the context of sports and the workplace (e.g., Childs & Stoeber, 2012; Hill & Appleton, 2011), with very little research examining perfectionism as it relates to burnout in students. To our knowledge, the only previous study to examine perfectionism and academic burnout was conducted by Zhang and colleagues (2007) and they used the Frost conceptualization of multidimensional perfectionism. The present research extended their findings to show that the Hewitt and Flett conceptualization of trait and self-presentational perfectionism is relevant when examining student burnout, as well.

While there has been research examining perfectionism and motivation, such as work on approach and avoidance goals, this was the first set of studies to establish these associations between perfectionism and both self-image and compassionate goals using Crocker's framework. Although compassionate goals were assessed in all four studies, it was not a primary focus of the current research because of the lack of a theoretical basis for expecting links between perfectionism and compassionate goals and also because self-image goals are more relevant and central to the self and identities of perfectionists. Nevertheless, it is worth noting that it was found in Study 1 and Study 2 that compassionate goals in the areas of academics, friendships, and self-improvement were positively linked with self-oriented perfectionism, socially prescribed perfectionism, perfectionistic self-promotion, and nondisplay of imperfection. This is noteworthy because compassionate goals are believed to promote social connectedness

(Canevello & Crocker, 2017), yet interpersonal perfectionism in particular is supposedly linked with social disconnection and alienation. It is important to note that self-oriented perfectionism remained significantly correlated with the pursuit of compassionate goals for self-improvement in Study 2 even after controlling for self-image goals. However, other dimensions of trait and self-presentational perfectionism were negatively correlated with compassionate goals in Study 1 and Study 2 after controlling for self-image goals.

Furthermore, compassionate goals in Study 3 and Study 4 in the areas of self-improvement and academics were not significantly correlated with any of the dimensions of perfectionism at any time point. Moreover, in the mediational model of Study 3, socially prescribed perfectionism at Time 1 was found to be negatively linked with compassionate goals at Time 2. Although the link was small in Study 3, these inconsistent findings between perfectionism and compassionate goals paint a very complex picture of what compassionate goals may actually look like in perfectionists from a person-perspective. Because perfectionism is maladaptive, whether compassionate goals are positive or negative likely depends on the context for each person.

Clearly, the associations between dimensions of perfectionism and compassionate goals need to be re-examined in future research, given that there are multiple reasons for people to pursue compassion goals. For example, a recent study suggests that there is a submissive form of compassion goals (versus genuine compassion) and some people have compassion goals in a non-altruistic way so that they can gain approval and avoid rejection (Catarino, Gilbert, McEwan, & Baião, 2014). More recently, submissive compassion was found to be linked with elevated levels of shame, self-criticism, depression, anxiety, as well as stress, but compassionate goals in the area of friendships were not (Gilbert et al., 2017). These results are consistent with

earlier research showing that the pursuit of academic prosocial goals is linked with gaining acceptance from peers and teachers among 475 early adolescents (Wentzel, 1994). Additionally, these findings accord with research demonstrating that people who have a high level of commitment to one perfectionistic goal are also likely to be highly committed to another perfectionistic goal, such as perfect grooming and perfect relationships (Flett, Sawatzky, & Hewitt, 1995). Future research should include the novel scale developed by Catarino and colleagues (2014) known as the Submissive Compassion Scale to better understand why certain perfectionists may be motivated by compassionate goals. It will be crucial for future work to take into account the important distinction between genuine compassion and other forms of compassion that are far from selfless.

Along similar lines, there may be an underlying motive to procrastinate by focusing on helping others instead of doing their own work, particularly for those high in socially prescribed perfectionism and perfectionistic self-presentation. Perhaps, pursuing compassionate goals for these individuals is a way of self-handicapping or as an avoidance strategy. Future longitudinal research is also needed to test if the longitudinal link between socially prescribed perfectionism and lower levels of compassionate goals can be replicated. The longitudinal link obtained does seem to be in keeping with the partial correlational analysis showing that socially prescribed perfectionism was negatively linked with compassionate goals in the area of friendships after controlling for self-image goals. It is important to note that if self-image goals had not been measured in the present research, the conclusion about compassionate goals would be quite different based on the zero-order correlations. The reality at the person-centered level is that many perfectionists will have elevations on both types of goals, which is consistent with the Flett

et al. (1995) study, and it is the self-image link with perfectionism that makes the most sense from a conceptual, substantive perspective.

While compassionate goals were not the main focus in the current research, the current results also further illuminate the nature of compassionate goals. First, it was found across studies that the measures of self-image and compassionate goals were significantly correlated in all instances. It is for this reason that researchers with similar results (e.g., Gilbert et al., 2017) tend to examine how compassionate goals relate to other measures after controlling for self-image goals. Second, Study 1 and Study 2 yielded results that suggest that compassionate goals are not necessarily "selfless" or "egoless." A tendency to pursue compassionate goals was linked in the current work with a social comparison orientation (see Study 1), suggesting that there is some degree of competitiveness and self-evaluative concern underscoring compassionate goals as well as self-image goals. In addition, compassionate goals were linked with greater self-consciousness in Study 1 and a validation seeking orientation in Study 2. Taken together, these results suggest that issues involving self and identity can be quite salient even when people are pursuing goals that are designed to enhance the well-being of other people.

Returning to the primary focus on self-image goals, hierarchical multiple regressions were performed in the first three studies to determine if perfectionistic self-presentation would predict unique variance in self-image goals across all three domains, over and above trait perfectionism. All three studies demonstrated that perfectionistic self-presentation did indeed predict self-image goals in the areas of academics, friendships, and self-improvement, above and beyond the dimensions of trait perfectionism. The individual predictors of self-image goals for both academics and friendships in Study 1 were self-oriented perfectionism, socially prescribed perfectionism, perfectionistic self-promotion, and nondisplay of imperfection; and the individual

predictors of self-image goals for self-improvement in Study 2 were self-oriented perfectionism, socially prescribed perfectionism, and nondisplay of imperfection. In Study 3, perfectionistic self-promotion at Time 1 was a unique individual predictor of self-image goals in the area of self-improvement at Time 2, while controlling for initial levels of self-image goals. Collectively, these findings suggest that individuals who are high in certain aspects of perfectionism also tend to have goals related to creating, maintaining, and defending desirable images of the self.

Study 4 advanced the findings from the previous three studies by incorporating a weekly diary format assessing stressful life events, interpersonal perfectionism, self-image and compassionate goals, as well as depression. This study replicated the correlational findings from the previous studies by showing that self-image goals in the area of academics were positively associated with dimensions of trait and self-presentational perfectionism. The key correlational findings involving the stressful event appraisals were that at Time 1, various aspects of trait and self-presentational perfectionism were linked with event unpleasantness, event stressfulness, and a longer duration of being bothered by the event. Moreover, self-image goals for academics were associated with greater event stressfulness at Time 1.

Another key purpose of Study 4 was to conduct latent growth curve modeling in order to examine if there was significant change in self-image goals and depression over time and whether interpersonal perfectionism at Time 1 would predict the initial status of self-image goals and depression, as well as the rate of change of these outcome variables. The key findings in this study were that while there was not significant change in depression scores, there was significant change in self-image goals scores each week over the course of the three weeks. Specifically, the average self-image goals scores decreased over time. This significant rate of change was not explained by interpersonal perfectionism at Time 1. Interpersonal perfectionism did significantly

predict higher self-image goals in the area of academics at baseline, as well as higher depression at baseline. Further research is needed to replicate the decreasing rate of change in self-image goals, as well as to identify factors that may help to explain this significant rate of change.

Limitations of the Current Research

It is important to acknowledge the limitations of the current research. Because of the correlational nature of this research, causal statements cannot be made. Future research in this area is needed in order to explore the causal associations, if any, among dimensions of perfectionism, self-image goals, and physical and psychological health. In addition, the majority of the participants in these studies were women. This is a common limitation in psychological research that uses samples of undergraduate university students. Future research should try to obtain data with a roughly equal number of men and women. This would enable the examination of gender differences, which is a domain of research in the perfectionism literature that has been quite limited. Furthermore, while this research used a diverse set of methods, all of the measures in the four studies were self-report scales. A key direction for future research will be to obtain informant ratings of perfectionism and perceived goal pursuits of participants. Examples may include ratings from a spouse, friend or relative, or physiological measures of stress. We also found relatively low alpha coefficients for other-oriented perfectionism in Studies 1-3 and private self-consciousness in Study 1, which is another limitation of the current research. Lastly, a limitation of Study 4 was the relatively small sample size of participants who completed the survey at all three time points; future multi-wave research is needed with a larger sample size. Future research may also explore latent growth curve models for self-image goals and depression when the time points are further apart, such as when variables are assessed each year over the

course of several years, and more waves of data would be ideal and would also allow for the examination of non-linear rates of change.

Another important direction for future research in this area is to examine perfectionism and self-image goals in children and adolescents from a developmental perspective. Research of this nature could help to establish the specific developmental processes and experiences that contribute to the association between perfectionism and self-image goals and the associated need for validation. A related topic for further exploration is to establish in longitudinal research that the associations with perfectionism reflect a stable tendency to pursue self-image goals so that self-image concerns have become chronic. Longitudinal research should also advance our understanding of a developmental sequence because it cannot be assumed that perfectionism is the cause of self-image goals; indeed, it is likely that a reciprocal association exists. It would also be interesting for future work to explore developmental trajectories for self-image goals, following up with participants each year or every few years.

Summary

In summary, a program of research was initiated in order to highlight the role of self-image goals in the lives of people with elevated levels of trait and self-presentational perfectionism. Across four studies with university students, it was established that aspects of perfectionism were linked with self-image goals, and the results were comparable regardless of whether the focus was on the achievement, interpersonal, or self-improvement contexts. To our knowledge, this was the first series of studies to find these associations between perfectionism and self-image goals. It was further established that self-image goals acted as a mediator of the links that perfectionism had with negative outcomes, such as psychological distress and burnout, both cross-sectionally and longitudinally. Additionally, both self-image and compassionate goals

mediated the longitudinal link between socially prescribed perfectionism and psychological distress. Overall, the findings from these studies suggest that individuals high in aspects of trait and self-presentational perfectionism tend to also have goals related to creating and defending positive images of the self. Although the pursuit of self-image goals might seem to be adaptive to the individual seeking these goals, there is now considerable evidence to suggest the opposite is true, so the present research has identified a key mechanism that accounts for when perfectionism becomes maladaptive. In addition, this research has highlighted a key goal orientation that can be the target of interventions designed to improve the health and well-being of people who feel the pressure inherent in trying to be and appear perfect.

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Table 1

Means, Standard Deviations, and Alpha Coefficients for All Measures -- Study 1

Variables	M	SD	Alphas
1. Self-Oriented Perfectionism	67.22	14.39	.87
2. Other-Oriented Perfectionism	58.75	8.74	.62
3. Socially Prescribed Perfectionism	58.22	10.58	.75
4. Perfectionistic Self-Promotion	40.29	10.77	.87
5. Nondisplay of Imperfection	42.44	10.71	.87
6. Nondisclosure of Imperfection	24.70	7.15	.79
7. Self-Image Goals - Academics	3.32	0.72	.91
8. Self-Image Goals - Friendships	3.12	0.75	.89
9. Compassionate Goals - Academics	3.47	0.73	.82
10. Compassionate Goals - Friendships	3.47	0.70	.82
11. Social Comparison Orientation	3.33	0.57	.80
12. Total Silencing the Self	86.34	16.93	.90
13. Private Self-Consciousness	34.36	5.36	.66
14. Public Self-Consciousness	24.61	5.40	.82

Note: $N = 285$.

Table 2

Intercorrelations Among Trait Perfectionism, Perfectionistic Self-Presentation, Self-Image and Compassionate Goals for Academics and Friendships, Social Comparison, Silencing the Self, and Private and Public Self-Consciousness -- Study 1

Measures	1	2	3	4	5	6	7	8	9	10	11	12	13
1. SOP	–												
2. OOP	.31**	–											
3. SPP	.52**	.26**	–										
4. PSP	.61**	.23**	.57**	–									
5. Ndspl	.40**	.11	.51**	.74**	–								
6. Ndscl	.19**	.12*	.46**	.61**	.61**	–							
7. ImageA	.46**	.12	.38**	.53**	.50**	.34**	–						
8. ImageF	.43**	.14*	.43**	.61**	.56**	.43**	.77**	–					
9. CompA	.34**	-.06	.16**	.27**	.21**	-.05	.57**	.40**	–				
10. CompF	.32**	-.02	.13*	.23**	.18**	-.04	.49**	.49**	.75**	–			
11. INCOM	.39**	.05	.31**	.37**	.40**	.06	.44**	.44**	.34**	.35**	–		
12. STSS	.19**	.03	.54**	.48**	.56**	.53**	.33**	.43**	.14*	.07	.25**	–	
13. Private	.34**	.02	.20**	.29**	.34**	.08	.34**	.35**	.34**	.40**	.49**	.19**	–
14. Public	.37**	.02	.37**	.47**	.56**	.27**	.41**	.45**	.20**	.24**	.57**	.41**	.66**

Note. $N = 285$. *$p < .05$, **$p < .01$, two-tailed. The abbreviations are as follows: SOP = Self-Oriented Perfectionism; OOP = Other-Oriented Perfectionism; SPP = Socially Prescribed Perfectionism; PSP = Perfectionistic Self-Promotion; Ndspl = Nondisplay of Imperfection; Ndscl = Nondisclosure of Imperfection; ImageA = Self-Image Goals for Academics; ImageF = Self-Image Goals for Friendships; CompA = Compassionate Goals for Academics; CompF = Compassionate Goals for Friendships; INCOM = Iowa-Netherlands Social Comparison Measure; STSS = Total Silencing the Self Scale; Private = Private Self-Consciousness; and Public = Public Self-Consciousness.

Table 3

Summary of Hierarchical Multiple Regression for Variables Predicting Self-Image Goals for Academics -- Study 1

Variable	B	SE B	ß	95% CI
Step 1				
Self-Oriented Perfectionism	.02	.003	.38***	[.01, .03]
Other-Oriented Perfectionism	-.004	.005	-.05	[-.01, .005]
Socially Prescribed Perfectionism	.01	.004	.19**	[.005, .02]
Step 2				
Perfectionistic Self-Promotion	.01	.006	.19*	[.00, .02]
Nondisplay of Imperfection	.02	.005	.24**	[.006, .03]
Nondislosure of Imperfection	.003	.007	.03	[-.01, .02]

Note. $R^2 = .239$ for Step 1; $\Delta R^2 = .105$ for Step 2. *$p < .05$, **$p < .01$, ***$p < .001$.

Table 4

Summary of Hierarchical Multiple Regression for Variables Predicting Self-Image Goals for Friendships -- Study 1

Variable	B	SE B	ß	95% CI
Step 1				
Self-Oriented Perfectionism	.02	.003	.29***	[.008, .02]
Other-Oriented Perfectionism	-.002	.005	-.03	[-.01, .007]
Socially Prescribed Perfectionism	.02	.004	.29***	[.01, .03]
Step 2				
Perfectionistic Self-Promotion	.02	.006	.31***	[.01, .03]
Nondisplay of Imperfection	.02	.005	.23**	[.006, .03]
Nondislosure of Imperfection	.006	.007	.05	[-.008, .02]

Note. $R^2 = .241$ for Step 1; $\Delta R^2 = .167$ for Step 2. $^{**}p < .01$, $^{***}p < .001$.

Table 5

Means, Standard Deviations, and Alpha Coefficients for All Measures -- Study 2

Variables	M	SD	Alphas
1. Self-Oriented Perfectionism	66.25	13.21	.85
2. Other-Oriented Perfectionism	58.37	8.03	.49
3. Socially Prescribed Perfectionism	60.51	11.87	.80
4. Perfectionistic Self-Promotion	41.82	9.94	.84
5. Nondisplay of Imperfection	43.24	10.56	.87
6. Nondisclosure of Imperfection	26.77	6.76	.72
7. Self-Image Goals - Self-Improvement	3.18	0.74	.90
8. Compassionate Goals - Self-Improvement	3.52	0.68	.80
9. Growth Seeking	27.17	7.49	.91
10. Validation Seeking	25.12	7.76	.90
11. Depression	14.41	7.58	.89
12. Burnout -- Exhaustion	17.63	7.37	.92
13. Burnout -- Cynicism	11.88	6.24	.87
14. Burnout -- Personal Accomplishment	14.02	6.97	.86

Note: $N = 227$.

Table 6

Intercorrelations Among Trait Perfectionism, Perfectionistic Self-Presentation, Self-Image and Compassionate Goals for Self-Improvement, Growth and Validation Seeking, Depression, and Burnout -- Study 2

Measures	1	2	3	4	5	6	7	8	9	10	11	12	13
1. SOP	–												
2. OOP	.16*	–											
3. SPP	.50**	.11	–										
4. PSP	.53**	.07	.57**	–									
5. Ndspl	.47**	.02	.48**	.75**	–								
6. Ndscl	.34**	.09	.55**	.71**	.64**	–							
7. Image	.44**	.03	.44**	.52**	.56**	.47**	–						
8. Comp	.38**	-.12	.19**	.20**	.25**	.04	.48**	–					
9. Grow	.20**	-.05	-.09	-.11	-.08	-.15*	.15*	.36**	–				
10. Val	.51**	.02	.59**	.51**	.57**	.46**	.59**	.28**	.16*	–			
11. Dep	.26**	-.02	.48**	.35**	.38**	.36**	.39**	.19**	-.03	.47**	–		
12. Exh	.28**	.17*	.35**	.31**	.39**	.26**	.38**	.24**	.11	.36**	.46**	–	
13. Cyn	.13	.12	.36**	.31**	.36**	.32**	.39**	.18**	-.008	.35**	.45**	.72**	–
14. Acc	-.41**	.02	-.04	-.13	-.20**	-.02	-.27**	-.38**	-.32**	-.17**	-.04	-.22**	-.04

Note. $N = 227$. *$p < .05$, **$p < .01$, two-tailed. The abbreviations are as follows: SOP = Self-Oriented Perfectionism; OOP = Other-Oriented Perfectionism; SPP = Socially Prescribed Perfectionism; PSP = Perfectionistic Self-Promotion; Ndspl = Nondisplay of Imperfection; Ndscl = Nondisclosure of Imperfection; Image = Self-Image Goals for Self-Improvement; Comp = Compassionate Goals for Self-Improvement; Grow = Growth Seeking; Val = Validation Seeking; Dep = Depression; Exh = Burnout Exhaustion; Cyn = Burnout Cynicism; and Acc = Burnout Personal Accomplishment.

Table 7

Summary of Hierarchical Multiple Regression for Variables Predicting Self-Image Goals for Self-Improvement -- Study 2

Variable	B	SE B	ß	95% CI
Step 1				
Self-Oriented Perfectionism	.02	.004	.30***	[.009, .02]
Other-Oriented Perfectionism	-.005	.005	-.05	[-.02, .006]
Socially Prescribed Perfectionism	.02	.004	.30***	[.01, .03]
Step 2				
Perfectionistic Self-Promotion	.003	.007	.04	[-.01, .02]
Nondisplay of Imperfection	.02	.006	.31***	[.01, .03]
Nondislosure of Imperfection	.01	.009	.13	[-.004, .03]

Note. $R^2 = .264$ for Step 1; $\Delta R^2 = .118$ for Step 2. ***$p < .001$.

Table 8

Summary of Multiple Regression for Variables Predicting Depression -- Study 2

Variable	B	SE B	95% CI
Step 1			
Self-Oriented Perfectionism	-.03	.04	[-.10, .05]
Other-Oriented Perfectionism	-.06	.05	[-.17, .06]
Socially Prescribed Perfectionism	.24***	.04	[.15, .32]
Perfectionistic Self-Promotion	-.07	.08	[-.22, .08]
Nondisplay of Imperfection	.11	.07	[-.02, .26]
Nondislosure of Imperfection	.06	.10	[-.13, .25]
Self-Image Goals	1.86*	.76	[.43, 3.26]

Note. $R^2 = .286$. *$p < .05$, ***$p < .001$.

Table 9

Summary of Multiple Regression for Variables Predicting Emotional Exhaustion -- Study 2

Variable	B	SE B	95% CI
Step 1			
Self-Oriented Perfectionism	-.003	.05	[-.11, .11]
Other-Oriented Perfectionism	.14*	.06	[.02, .24]
Socially Prescribed Perfectionism	.12*	.05	[.02, .22]
Perfectionistic Self-Promotion	-.05	.08	[-.20, .10]
Nondisplay of Imperfection	.20*	.09	[.03, .39]
Nondislosure of Imperfection	-.11	.10	[-.31, .07]
Self-Image Goals	2.11**	.77	[.61, 3.84]

Note. $R^2 = .241$. *$p < .05$, **$p < .01$.

Table 10

Summary of Multiple Regression for Variables Predicting Cynicism -- Study 2

Variable	B	SE B	95% CI
Step 1			
Self-Oriented Perfectionism	-.10**	.04	[-.17, -.02]
Other-Oriented Perfectionism	.09	.05	[-.009, .19]
Socially Prescribed Perfectionism	.13**	.04	[.04, .21]
Perfectionistic Self-Promotion	-.02	.08	[-.16, .13]
Nondisplay of Imperfection	.12	.06	[-.008, .25]
Nondislosure of Imperfection	.006	.10	[-.17, .18]
Self-Image Goals	2.29***	.64	[1.02, 3.72]

Note. $R^2 = .247$. $^{**}p < .01$, $^{***}p < .001$.

Table 11

Means, Standard Deviations, and Alpha Coefficients for Measures in Times 1 and 2 -- Study 3

		M	*SD*	*Alpha*
Self-Oriented	Time 1	67.03	13.18	.86
	Time 2	–	–	–
Other-Oriented	Time 1	59.37	8.75	.62
	Time 2	–	–	–
Socially Prescribed Perfectionistic Self-Promotion	Time 1	58.27	11.97	.82
	Time 2	–	–	–
Nondisplay of Imperfection	Time 1	40.66	10.61	.88
	Time 2	40.41	10.88	.89
Nondisclosure of Imperfection	Time 1	42.94	11.30	.90
	Time 2	42.49	11.11	.90
Self-Image Goals	Time 1	25.11	6.88	.77
	Time 2	24.93	7.25	.80
Compassionate Goals	Time 1	3.09	0.69	.85
	Time 2	3.02	0.65	.86
Depression	Time 1	3.52	0.73	.81
	Time 2	3.50	0.70	.80
Social Anxiety	Time 1	19.10	12.05	.93
	Time 2	19.13	11.21	.92
	Time 1	47.68	25.17	.96
	Time 2	47.03	25.51	.96

Loneliness	Time 1	43.67	10.74	.93
	Time 2	43.93	10.95	.93
Physical Health	Time 1	312.96	65.85	.89
	Time 2	314.40	64.40	.89
Mental Health	Time 1	245.07	85.98	.88
	Time 2	243.03	86.21	.88

Note. $N = 187$.

Table 12

Intercorrelations Among Trait Perfectionism, Perfectionistic Self-Presentation, Self-Image and Compassionate Goals for Self-Improvement, Depression, Social Anxiety, Loneliness, and Physical and Mental Health -- Study 3, Time 1

Measures	1	2	3	4	5	6	7	8	9	10	11	12
1. SOP	–											
2. OOP	.29**	–										
3. SPP	.42**	.26**	–									
4. PSP	.53**	.18*	.51**	–								
5. Ndspl	.28**	.13	.54**	.65**	–							
6. Ndscl	.16*	.07	.53**	.58**	.60**	–						
7. ImageI	.21**	.07	.32**	.39**	.40**	.34**	–					
8. CompI	.13	-.06	-.02	.07	.13	-.02	.50**	–				
9. CES-D	-.003	.04	.47**	.34**	.47**	.51**	.25**	-.04	–			
10. LSAS	-.009	.05	.29**	.29**	.51**	.32**	.21**	.007	.44**	–		
11. UCLA	-.03	-.02	.48**	.32**	.47**	.53**	.21**	-.12	.72**	.53**	–	
12. Phys	.02	.001	-.34**	-.11	-.26**	-.38**	-.15*	.08	-.49**	-.30**	-.40**	–
13. Ment	.02	.02	-.41**	-.22**	-.47**	-.42**	-.19**	.005	-.71**	.44**	-.59**	.60**

Note. $N = 187$. *$p < .05$, **$p < .01$, two-tailed. The abbreviations are as follows: SOP = Self-Oriented Perfectionism; OOP = Other-Oriented Perfectionism; SPP = Socially Prescribed Perfectionism; PSP = Perfectionistic Self-Promotion; Ndspl = Nondisplay of Imperfection; Ndscl = Nondisclosure of Imperfection; ImageI = Self-Image Goals for Self-Improvement; CompI = Compassionate Goals for Self-Improvement; CES-D = Center for Epidemiological Studies-Depression; LSAS = Liebowitz Social Anxiety Scale; UCLA = UCLA Loneliness Scale; Phys = Physical Health; and Ment = Mental Health.

Table 13

Intercorrelations Among Perfectionistic Self-Presentation, Self-Image and Compassionate Goals for Self-Improvement, Depression, Social Anxiety, Loneliness, and Physical and Mental Health -- Study 3, Time 2

Measures	1	2	3	4	5	6	7	8	9	10
1. PSP	–									
2. Ndspl	.65**	–								
3. Ndscl	.65**	.59**	–							
4. ImageI	.53**	.51**	.50**	–						
5. CompI	-.05	-.005	-.10	.36**	–					
6. CES-D	.28**	.41**	.39**	.21**	-.15*	–				
7. LSAS	.28**	.49**	.25**	.21**	.06	.45**	–			
8. UCLA	.37**	.49**	.57**	.20**	-.23**	.67**	.53**	–		
9. Physical	-.02	-.16*	-.24**	-.13	.16*	-.49**	-.26**	-.37**	–	
10. Mental	-.26**	-.42**	-.30**	-.16*	-.003	-.71**	-.46**	-.55**	.53**	–

Note. $N = 187$. *$p < .05$, **$p < .01$, two-tailed. The abbreviations are as follows: PSP = Perfectionistic Self-Promotion; Ndspl = Nondisplay of Imperfection; Ndscl = Nondisclosure of Imperfection; ImageI = Self-Image Goals for Self-Improvement; CompI = Compassionate Goals for Self-Improvement; Growth = Growth Seeking; Valid = Validation Seeking; CES-D = Center for Epidemiological Studies-Depression; LSAS = Liebowitz Social Anxiety Scale; UCLA = UCLA Loneliness Scale; Physical = Physical Health; and Mental = Mental Health.

Table 14

Summary of Hierarchical Multiple Regression for Time 1 Variables Predicting Time 2 Self-Image Goals for Self-Improvement -- Study 3

Variable	B	SE B	ß	95% CI
Step 1				
Time 1 Self-Image Goals	.46	.06	.49***	[.34, .58]
Step 2				
Self-Oriented Perfectionism	.004	.004	.08	[-.003, .01]
Other-Oriented Perfectionism	-.01	.005	-.14*	[-.02, -.001]
Socially Prescribed Perfectionism	.004	.004	.07	[-.004, .01]
Step 3				
Perfectionistic Self-Promotion	.02	.006	.27**	[.005, .03]
Nondisplay of Imperfection	.006	.005	.11	[-.004, .02]
Nondislosure of Imperfection	-.007	.008	-.08	[-.02, .009]

Note. $R^2 = .240$ for Step 1; $\Delta R^2 = .023$ for Step 2; $\Delta R^2 = .056$ for Step 3. *$p < .05$, **$p < .01$, ***$p < .001$.

Table 15

Summary of Multiple Regression for Time 1 Variables Predicting Time 2 Social Anxiety -- Study 3

Variable	B	SE B	95% CI
Step 1			
Time 1 Social Anxiety	.82***	.04	[.74, .89]
Step 2			
Self-Oriented Perfectionism	-.20	.11	[-.42, .001]
Other-Oriented Perfectionism	-.17	.14	[-.43, .09]
Socially Prescribed Perfectionism	.19	.11	[-.01, .42]
Perfectionistic Self-Promotion	-.08	.16	[-.37, .25]
Nondisplay of Imperfection	.28	.18	[-.06, .58]
Nondislosure of Imperfection	.12	.24	[-.33, .60]
Self-Image Goals	-.81	1.73	[-4.28, 2.68]

Note. $R^2 = .651$ for Step 1; $\Delta R^2 = .028$ for Step 2. ***$p < .001$.

Table 16

Summary of Multiple Regression for Time 1 Variables Predicting Time 2 Loneliness -- Study 3

Variable	B	SE B	ß	95% CI
Step 1				
Time 1 Loneliness	.73	.05	.72***	[.63, .84]
Step 2				
Self-Oriented Perfectionism	-.11	.06	-.13	[-.22, .005]
Other-Oriented Perfectionism	.10	.07	.08	[-.03, .23]
Socially Prescribed Perfectionism	.14	.07	.16*	[.01, .27]
Perfectionistic Self-Promotion	-.09	.08	-.09	[-.26, .08]
Nondisplay of Imperfection	.09	.07	.10	[-.05, .24]
Nondislosure of Imperfection	.06	.12	.04	[-.17, .29]
Self-Image Goals	.42	1.06	.03	[-1.67, 2.51]
Compassionate Goals	.64	.92	.04	[-1.18, 2.46]

Note. $R^2 = .518$ for Step 1; $\Delta R^2 = .042$ for Step 2. *$p < .05$, ***$p < .001$.

Table 17

Summary of Multiple Regression for Time 1 Variables Predicting Time 2 Physical Health -- Study 3

Variable	B	SE B	95% CI
Step 1			
Time 1 Physical Health	.55***	.07	[.41, .69]
Step 2			
Self-Oriented Perfectionism	.89*	.35	[.17, 1.69]
Other-Oriented Perfectionism	.54	.45	[-.36, 1.47]
Socially Prescribed Perfectionism	-1.02*	.46	[-1.90, -.25]
Perfectionistic Self-Promotion	-.03	.59	[-1.14, .99]
Nondisplay of Imperfection	.07	.46	[-.90, 1.04]
Nondislosure of Imperfection	.26	.70	[-1.09, 1.65]
Self-Image Goals	-11.40	6.87	[-25.95, 3.42]
Compassionate Goals	12.70*	5.71	[1.08, 24.20]

Note. $R^2 = .378$ for Step 1; $\Delta R^2 = .061$ for Step 2. *$p < .05$, ***$p < .001$.

Table 18

Means, Standard Deviations, and Alpha Coefficients for Measures in Times 1, 2, and 3 -- Study 4

		M	*SD*	*Alpha*
Self-Oriented	Time 1	71.62	13.76	.87
	Time 2	–	–	–
	Time 3	–	–	–
Other-Oriented	Time 1	58.64	9.08	.64
	Time 2	–	–	–
	Time 3	–	–	–
Socially Prescribed	Time 1	61.34	11.78	.80
	Time 2	–	–	–
	Time 3	–	–	–
Perfectionistic Self-Promotion	Time 1	42.47	11.60	.88
	Time 2	–	–	–
	Time 3	–	–	–
Nondisplay of Imperfection	Time 1	44.94	11.56	.88
	Time 2	–	–	–
	Time 3	–	–	–
Nondisclosure of Imperfection	Time 1	26.14	7.65	.78
	Time 2	–	–	–
	Time 3	–	–	–
Self-Image Goals	Time 1	3.29	0.62	.84
	Time 2	3.12	0.68	.87

	Time 3	3.00	0.72	.89
Compassionate Goals	Time 1	3.56	0.70	.77
	Time 2	3.45	0.75	.76
	Time 3	3.29	0.77	.83
Depression	Time 1	12.96	6.48	.84
	Time 2	11.45	5.94	.82
	Time 3	12.58	6.35	.85
Event Unpleasantness	Time 1	5.25	1.69	–
	Time 2	5.00	1.61	–
	Time 3	5.20	1.82	–
Event Stressfulness	Time 1	5.48	1.43	–
	Time 2	5.28	1.46	–
	Time 3	5.26	1.70	–
Event Duration	Time 1	4.86	1.80	–
	Time 2	4.66	1.70	–
	Time 3	4.63	1.91	–

Note. $N = 155$ for Time 1; $N = 103$ for Time 2; $N = 95$ for Time 3.

Table 19

Frequencies of Stressful Events Within Each Category at Times 1, 2, and 3 -- Study 4

Categories of Stressful Events	Time 1	Time 2	Time 3
Academics	90	60	48
Interpersonal Relationships	17	9	10
Job-Related	3	4	3
Money-Related	3	0	0
Health or Illness	3	2	3
Combination of Factors	29	16	15
Daily Hassle	4	5	8
No Event Experienced	3	2	2
No Event Reported (Blank)	3	5	6

Note. $N = 155$ for Time 1; $N = 103$ for Time 2; $N = 95$ for Time 3.

Table 20

Intercorrelations Among Trait Perfectionism, Perfectionistic Self-Presentation, Self-Image and Compassionate Goals for Academics, Depression, Event Unpleasantness, Event Stressfulness, and Event Duration -- Study 4, Time 1

Measures	1	2	3	4	5	6	7	8	9	10	11	12
1. SOP	–											
2. OOP	.26**	–										
3. SPP	.32**	.21**	–									
4. PSP	.61**	.21**	.47**	–								
5. Ndispl	.39**	.11	.42**	.71**	–							
6. Ndiscl	.40**	.19*	.55**	.66**	.58**	–						
7. Image	.44**	.13	.44**	.48**	.41**	.42**	–					
8. Comp	.09	-.10	.13	.007	-.03	-.04	.46**	–				
9. Dep	.21*	.09	.44**	.41**	.44**	.49**	.30**	.11	–			
10. Unple	.08	-.009	.04	.15	.18*	.10	.10	.22**	.32**	–		
11. Stress	.23**	-.08	.12	.23**	.23**	.11	.19*	.23**	.40**	.61**	–	
12. Durat	.20*	-.05	.10	.19*	.21**	.11	.12	.13	.36**	.50**	.66**	–

Note. $N = 155$. *$p < .05$, **$p < .01$, two-tailed. The abbreviations are as follows: SOP = Self-Oriented Perfectionism; OOP = Other-Oriented Perfectionism; SPP = Socially Prescribed Perfectionism; PSP = Perfectionistic Self-Promotion; Ndispl = Nondisplay of Imperfection; Ndiscl = Nondisclosure of Imperfection; Image = Self-Image Goals for Academics; Comp = Compassionate Goals for Academics; Dep = Depression; Unple = Event Unpleasantness; Stress = Event Stressfulness; and Durat = Event Duration.

Table 21

Intercorrelations Among Self-Image and Compassionate Goals for Academics, Depression, Event Unpleasantness, Event Stressfulness, and Event Duration -- Study 4, Time 2

Measures	1	2	3	4	5	6
1. Self-Image	–					
2. Compassion	.53**	–				
3. Depression	.20*	.07	–			
4. Unpleasant	.06	.05	.18	–		
5. Stressful	.10	.004	.27**	.69**	–	
6. Duration	.10	-.02	.20*	.55**	.57**	–

Note. $N = 103$. *$p < .05$, **$p < .01$, two-tailed. The abbreviations are as follows: Self-Image = Self-Image Goals for Academics; Compassion = Compassionate Goals for Academics; Unpleasant; Event Unpleasantness; Stressful = Event Stressfulness; and Duration = Event Duration.

Table 22

Intercorrelations Among Self-Image and Compassionate Goals for Academics, Depression, Event Unpleasantness, Event Stressfulness, and Event Duration -- Study 4, Time 3

Measures	1	2	3	4	5	6
1. Self-Image	–					
2. Compassion	.56**	–				
3. Depression	.18	.15	–			
4. Unpleasant	.19	.31**	.29**	–		
5. Stressful	.19	.31**	.39**	.81**	–	
6. Duration	.16	.19	.35**	.68**	.76**	–

Note. $N = 95$. *$p < .05$, **$p < .01$, two-tailed. The abbreviations are as follows: Self-Image = Self-Image Goals for Academics; Compassion = Compassionate Goals for Academics; Unpleasant; Event Unpleasantness; Stressful = Event Stressfulness; and Duration = Event Duration.

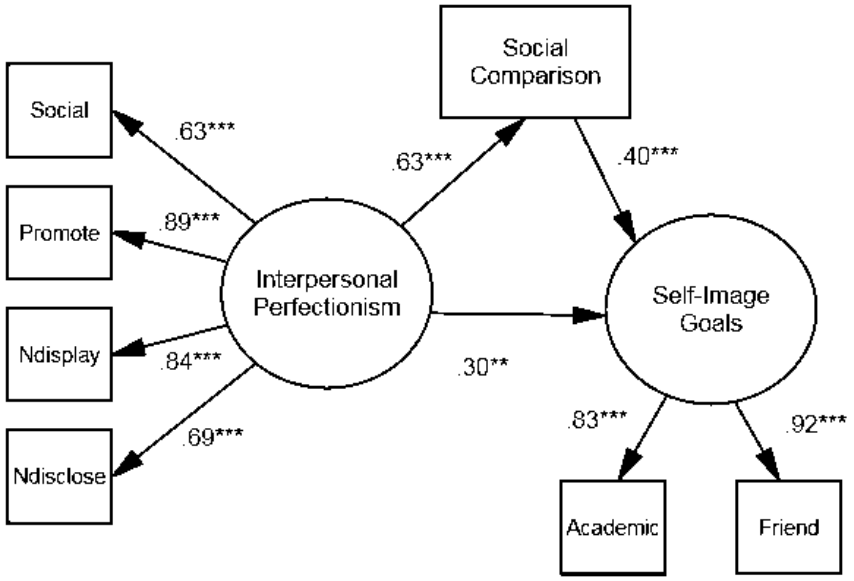

Figure 1. Final Model of Interpersonal Perfectionism, Social Comparison, and Self-Image Goals -- Study 1

Note. ***$p < .001$. Standardized parameter estimates are shown. Error terms have been omitted from the figure for ease of presentation. The abbreviations are as follows: Social = Socially Prescribed Perfectionism; Promote = Perfectionistic Self-Promotion; Ndisplay = Nondisplay of Imperfection; Ndisclose = Nondisclosure of Imperfection; and Friend = Friendships.

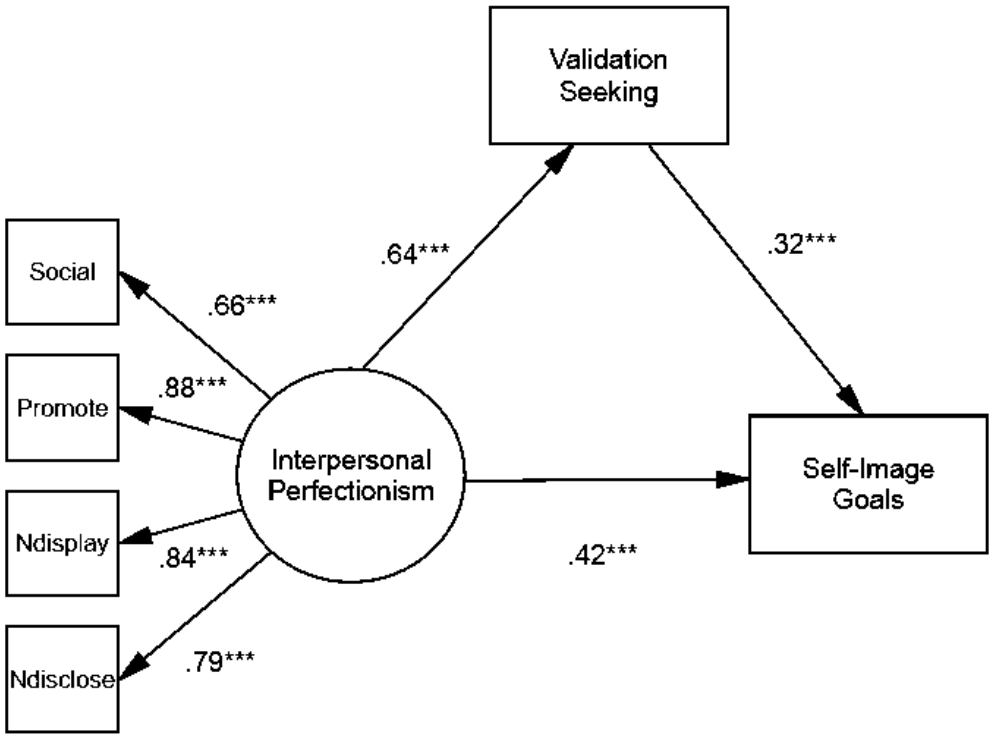

Figure 2. Final Model of Interpersonal Perfectionism, Validation Seeking, and Self-Image Goals -- Study 2

Note. ***$p < .001$. Standardized parameter estimates are shown. Error terms have been omitted from the figure for ease of presentation. The abbreviations are as follows: Social = Socially Prescribed Perfectionism; Promote = Perfectionistic Self-Promotion; Ndisplay = Nondisplay of Imperfection; and Ndisclose = Nondisclosure of Imperfection.

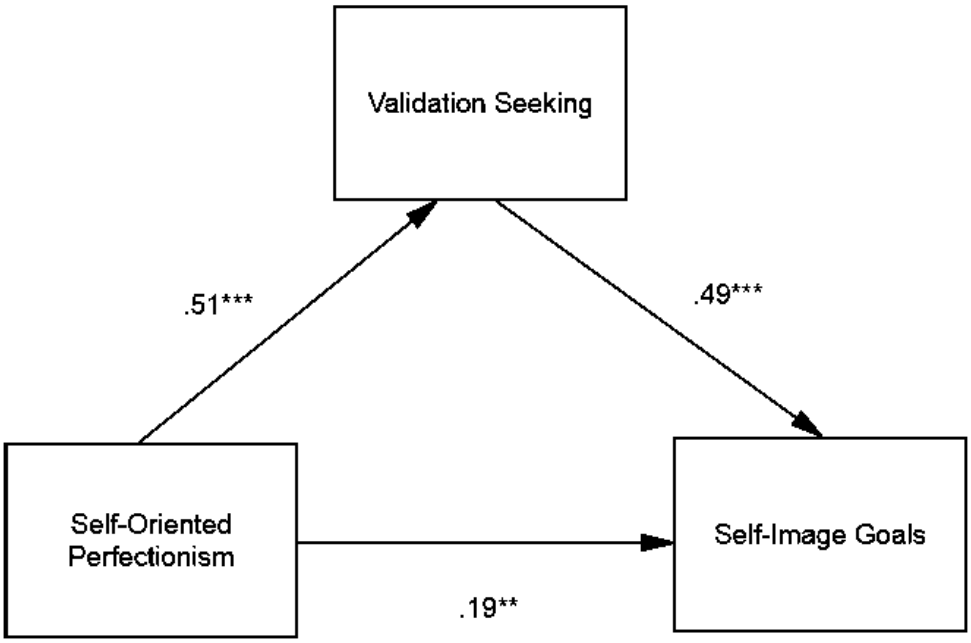

Figure 3. Final Model of Self-Oriented Perfectionism, Validation Seeking, and Self-Image Goals -- Study 2

Note. $^{**}p < .01$, $^{***}p < .001$. Standardized parameter estimates are shown. Error terms have been omitted from the figure for ease of presentation.

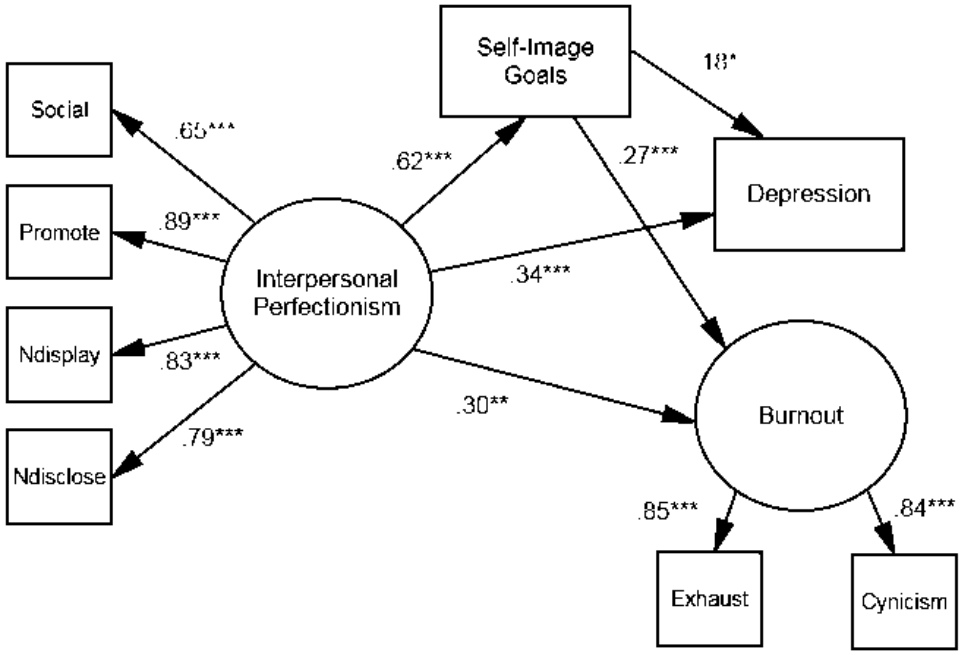

Figure 4. Final Model of Interpersonal Perfectionism, Self-Image Goals, Depression, and Student Burnout -- Study 2

Note. $*p < .05$, $**p < .01$, $***p < .001$. Standardized parameter estimates are shown. Error terms and the correlation between depression and burnout have been omitted from the figure for ease of presentation. The abbreviations are as follows: Social = Socially Prescribed Perfectionism; Promote = Perfectionistic Self-Promotion; Ndisplay = Nondisplay of Imperfection; Ndisclose = Nondisclosure of Imperfection; and Exhaust = Emotional Exhaustion.

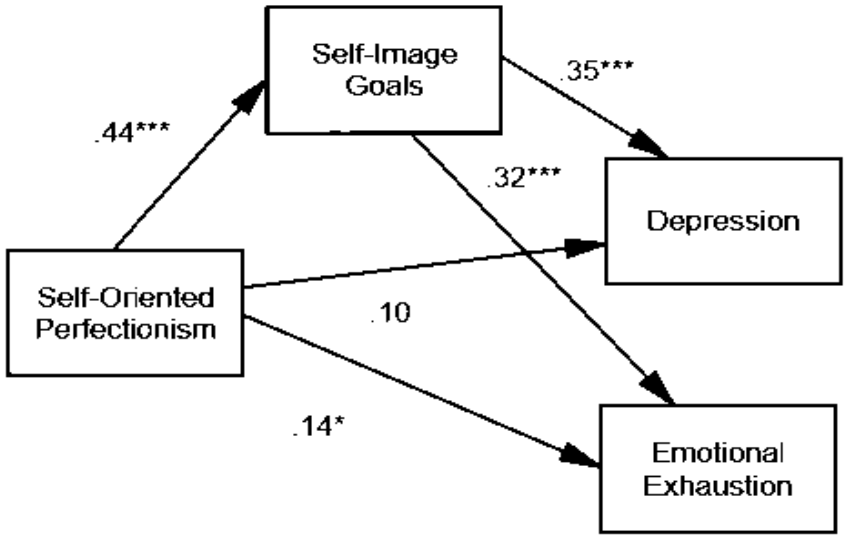

Figure 5. Final Model of Self-Oriented Perfectionism, Self-Image Goals, Depression, and Emotional Exhaustion -- Study 2

Note. $*p < .05$, $***p < .001$. Standardized parameter estimates are shown. Error terms and the correlation between depression and emotional exhaustion have been omitted from the figure for ease of presentation.

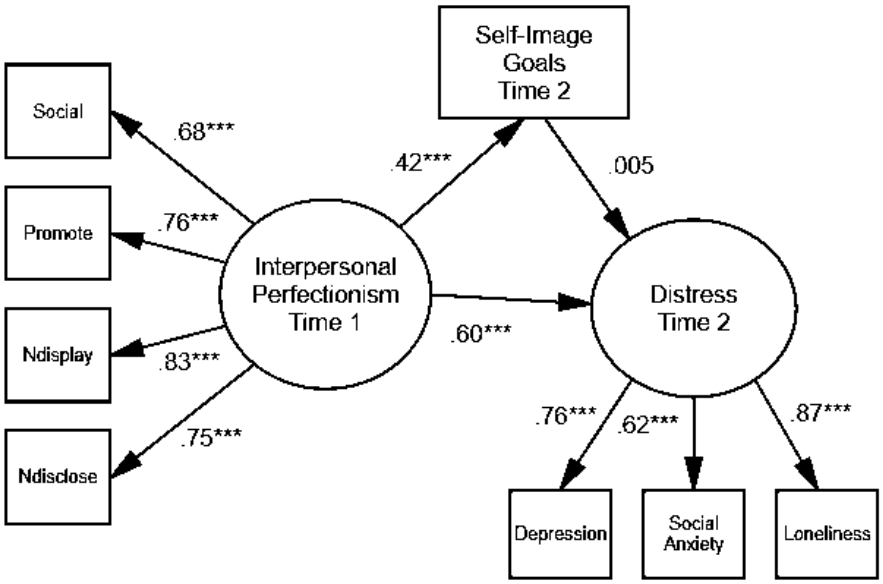

Figure 6. Final Model of Time 1 Interpersonal Perfectionism, Time 2 Self-Image Goals, and Time 2 Distress -- Study 3

Note. ***$p < .001$. Standardized parameter estimates are shown. Error terms have been omitted from the figure for ease of presentation. The abbreviations are as follows: Social = Socially Prescribed Perfectionism; Promote = Perfectionistic Self-Promotion; Ndisplay = Nondisplay of Imperfection; and Ndisclose = Nondisclosure of Imperfection.

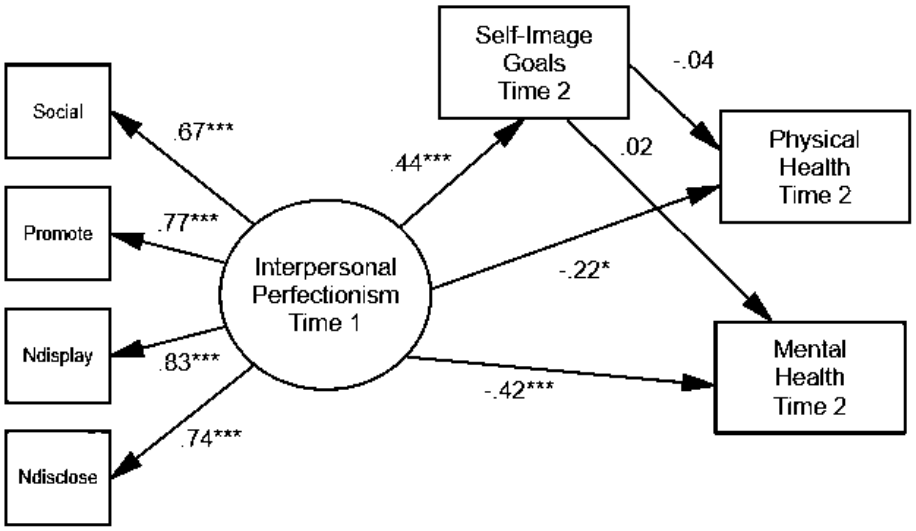

Figure 7. Final Model of Time 1 Interpersonal Perfectionism, Time 2 Self-Image Goals, and Time 2 Physical and Mental Health -- Study 3

Note. ***$p < .001$. Standardized parameter estimates are shown. Error terms and the correlation between physical and mental health have been omitted from the figure for ease of presentation. The abbreviations are as follows: Social = Socially Prescribed Perfectionism; Promote = Perfectionistic Self-Promotion; Ndisplay = Nondisplay of Imperfection; and Ndisclose = Nondisclosure of Imperfection.

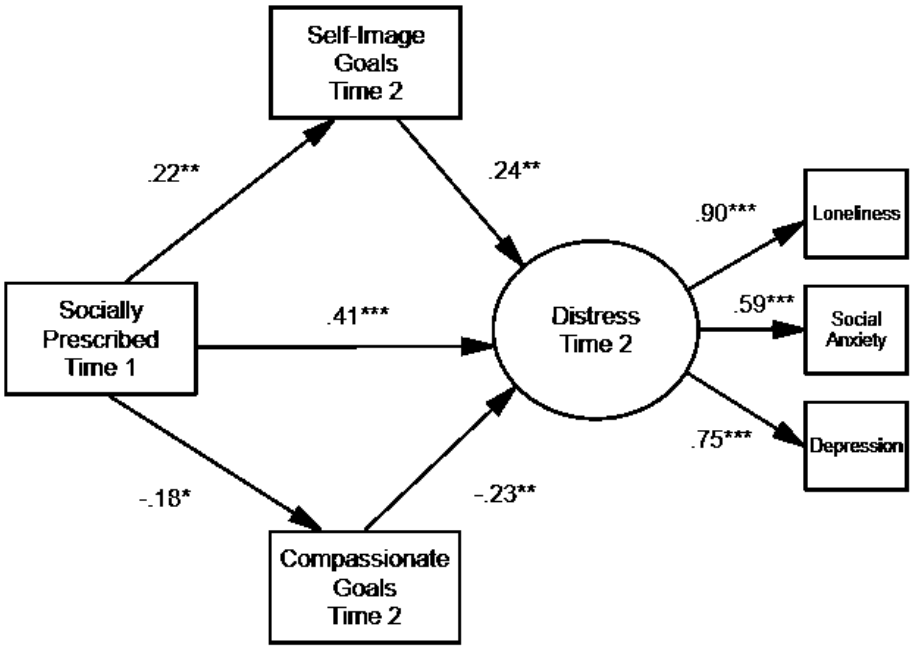

Figure 8. Final Model of Time 1 Socially Prescribed Perfectionism, Time 2 Self-Image and Compassionate Goals, and Time 2 Distress -- Study 3

Note. $*p < .05$, $**p < .01$, $***p < .001$. Standardized parameter estimates are shown. Error terms and the correlation between self-image and compassionate goals have been omitted from the figure for ease of presentation.

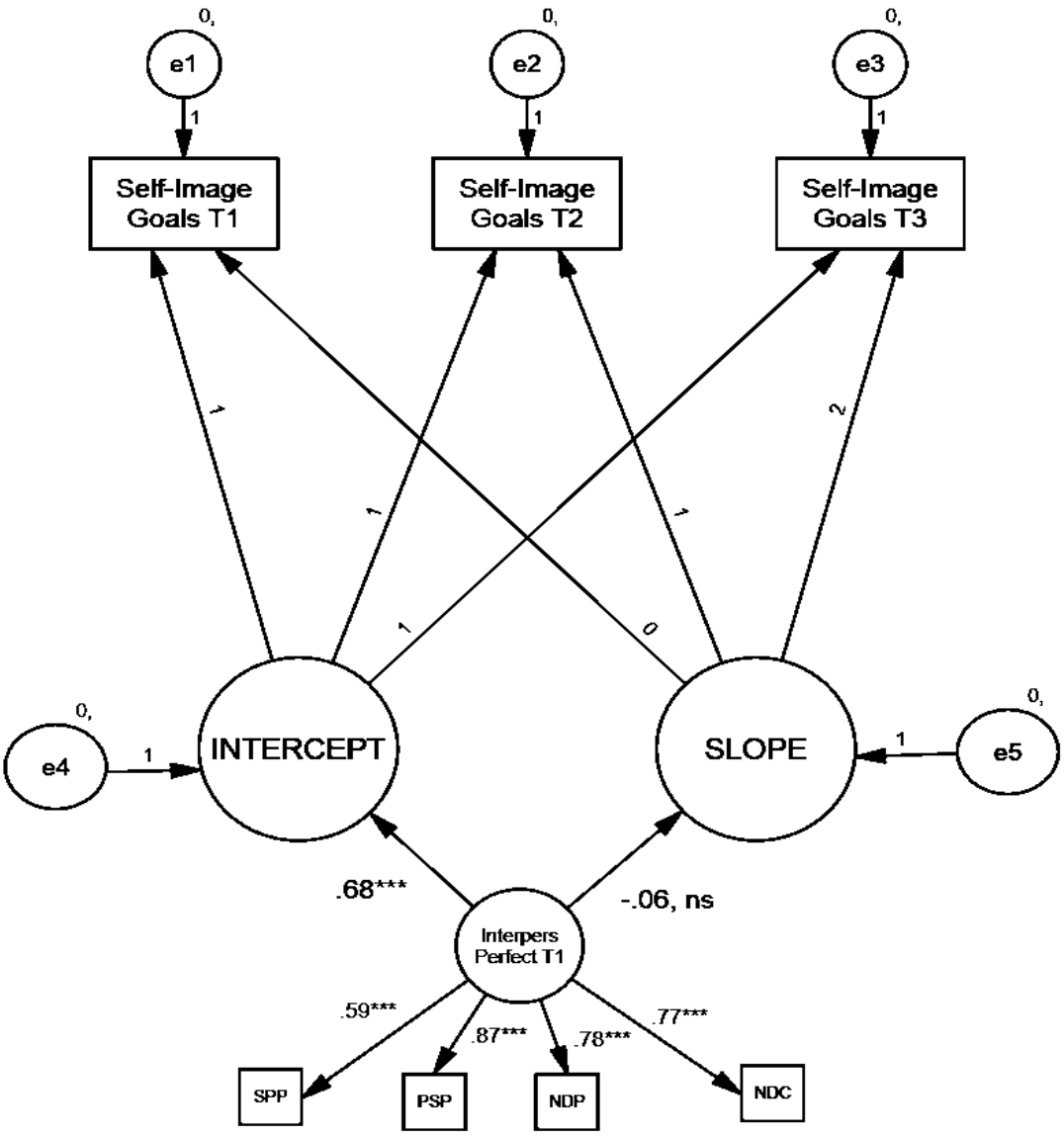

Figure 9. Latent Growth Curve Model of Self-Image Goals with Time 1 Interpersonal Perfectionism as a Predictor -- Study 4

Note. ***$p < .001$. Standardized parameter estimates are shown. The correlation between the Intercept and Slope has been removed for ease of presentation. The abbreviations are as follows: Interpers Perfect = Interpersonal Perfectionism; SPP = Socially Prescribed Perfectionism; PSP = Perfectionistic Self-Promotion; NDP = Nondisplay of Imperfection; and NDC = Nondisclosure of Imperfection.

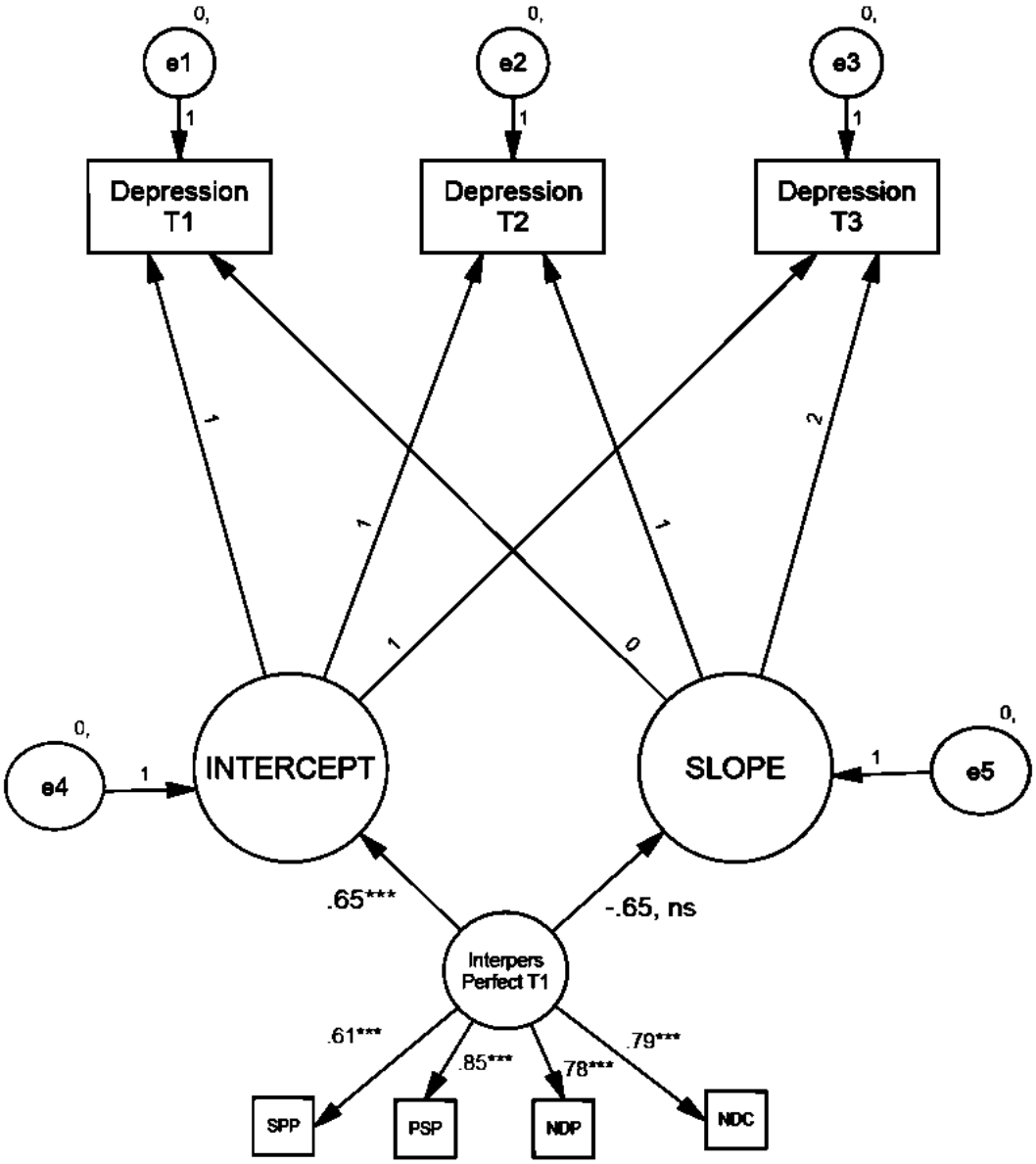

Figure 10. Latent Growth Curve Model of Depression with Time 1 Interpersonal Perfectionism as a Predictor -- Study 4

Note. ***$p < .001$. Standardized parameter estimates are shown. The correlation between the Intercept and Slope has been removed for ease of presentation. The abbreviations are as follows: Interpers Perfect = Interpersonal Perfectionism; SPP = Socially Prescribed Perfectionism; PSP = Perfectionistic Self-Promotion; NDP = Nondisplay of Imperfection; and NDC = Nondisclosure of Imperfection.